



We'll take care of it.

OCCUPATIONAL JOB DICTIONARY

FACILITY MANAGEMENT | CATERING | CLEANING

WHAT: An analysis of regular tasks and human movements performed by Spotless employees in the resources business.

FOR: Spotless

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FOREWORD

An **OCCUPATIONAL JOB DICTIONARY** provides an analysis of the regular work tasks and human movements for all jobs within an organisation. The document is tailored to the needs of **SPOTLESS** in their resources business – analysing and defining key tasks / movements for jobs performed in the facilities management, catering and cleaning services, in compliance with relevant OHS, WorkCover and EEO requirements.

The **OCCUPATIONAL JOB DICTIONARY** functions as a manual handling guide for Spotless job tasks as a tool in recruitment, training, injury prevention and return to work planning. It provides general guidance for managers and employees on the identification, assessment and control of safety and health hazards and risks associated with manual tasks – in which force is exerted, loads are handled, movements are repeated, postures are sustained, and equipment or tools are used which expose employees to potential for musculoskeletal disorders.

Benefits of using this **OCCUPATIONAL JOB DICTIONARY** include:

- Preventing injury, illness, pain and suffering of individuals in the workplace
- Reduction in workers compensation claims, which may lead to lower insurance premiums
- Faster, easier and most importantly, a safer return to work for employees who sustain an injury
- Job demands for individual occupations highlighted to match employees physical capacity - assistance with job matching at pre-placement assessments
- Provides a base for the generation of Safe Operating Procedures and employee training
- Creation of a safer workplace and enhanced safety culture through stakeholder education
- Improved business performance, efficiency and productivity
- Fewer absences and less disruption
- Retention of skilled employees

NOTE: The photographs included in this **OCCUPATIONAL JOB DICTIONARY** were taken for illustrative purposes only to assist description of a task and its physical demands. These images should not be used for reference when performing tasks – see disclaimer below. Permission was obtained from subjects for their image/s to be published in this **OCCUPATIONAL JOB DICTIONARY**.

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***Loss** includes loss, damage, liability, cost, expense, illness and injury, including death.*

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HEALTH & LIFESTYLE COORDINATOR (HLC)
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KITCHEN UTILITY | DINING/CATERING UTILITY
MANAGER – which includes Contract Manager | Village Manager | Duty Manager (Grounds, Transport, Mine site) | Catering Manager | Accommodation & Housekeeping Manager | Bar/Retail Manager
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TOWN SERVICES CLEANER
TRANSPORT UTILITY

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JOB ROLE PROFILE

ADMIN UTILITY

WORK / REST PATTERNS	10-12 hours per day		
USUAL PHYSICAL TASKS	ADMIN. TASKS / PAPERWORK CLEAN APPLIANCES CLEAN PIGEON HOLES CLEAN SURFACES COMPUTER DUTIES	DISPENSE CHEMICALS DRIVE BUGGY DUSTING EMPTY DESK DUSTBINS KEY MANAGEMENT / ROOM CHECK IN LUGGAGE HANDLING	MAIL / FREIGHT CHECK IN MOVE TROLLEY PERFORM ROOM CHECKS STOCK SHELVES USE OFFICE EQUIPMENT USE PHONE/RADIO VACUUM
PHYSICAL DEMAND LEVEL	MEDIUM. See WORK ATTRIBUTES and BODY DEMANDS table below.		
PHYSICAL RISK FACTORS	Fatigue Repetition Forceful exertion Awkward postures		
TOOLS	Computer Chair Desk Phone/Radio Buggy Office equipment – such as photocopier, guillotine, laminator, scanner, document binder		
GRIP TYPE	Computer mouse Computer keyboard	Cylindrical Pen	Pinch Power grip
HANDLING REQUIREMENTS	Varied size and frequency. FREQUENT: Computer Pens Documents Keys Cleaning materials OCCASIONAL: Phone/Radio Office equipment Mail Parcels		
FORCE EXERTION	0 – 10 kg through general work scope. May be required to lift 10kg – 20kg if assisting other work areas.		
ENVIRONMENTAL FACTORS	Large camp area / large work area Uneven ground Variable weather- dust, heat, extreme heat, humidity, rain, sun, wind, mud Remote/isolated location Limited medical facilities Indoors - room temperature Ergonomics		
PPE	Safety boots Blue/business shirt and long black pants Hi Vis clothing – as required Safety glasses Gloves – manual handling, disposable Hat		
CONTROLS	Computer Phone/Radio Buggy Hazard/Risk assessment procedures		
HEIGHTS	N / A		
HYGIENE EXPOSURES	Dirty/contaminated rooms Cross contamination – food/rubbish handling		

JOB ROLE PROFILE CONTINUED

ADMIN UTILITY

WORK ATTRIBUTES: POSTURES / PHYSICAL DEMANDS / REACHING

	WEIGHT	NEVER 0%	OCCASIONAL 1% – 33%	FREQUENT 34% – 66%	CONSTANT 67% – 100%
SIT					☒
WALK including uneven terrain and gradients			☒		
STAND				☒	
LOW WORK SITTING (NECK STOOP)		☒			
LOW WORK STANDING (BACK STOOP)				☒	
STAIR CLIMB		☒			
LADDER CLIMB			☒ Safety Step		
BALANCE		☒			
KNEEL		☒			
CRAWL		☒			
CROUCH/LOW SQUAT		☒			
SQUAT			☒		
REACH FORWARD					☒
REACH OVERHEAD				☒	
SUSTAINED WORK – BELOW KNEE		☒			
SUSTAINED WORK – ABOVE SHOULDERS		☒			
UPPER LIMB REPETITIVE ACTION					☒
UNILATERAL CARRY	up to 5kg		☒		
BILATERAL CARRY	up to 15kg		☒		
PULL / PUSH			☒		
LIFT TO WAIST HEIGHT	1-3kg			☒	
LIFT TO WAIST HEIGHT	15kg		☒		
LIFT TO SHOULDER / EYE LEVEL	0.5kg		☒		
LIFT TO SHOULDER / EYE LEVEL	1-5kg		☒		
LIFT TO SHOULDER / EYE LEVEL	10-15kg		☒		
LIFT - Other					
HAND DEXTERITY					☒
GRIPPING					☒
OVERHEAD LYING DOWN		☒			
TRUNK ROTATION STANDING					☒
TRUNK ROTATION SITTING		☒			
OTHER					

JOB ROLE PROFILE CONTINUED

ADMIN UTILITY

BODY DEMANDS

	NEVER 0%	OCCASIONAL 1% – 33%	FREQUENT 34% – 66%	CONSTANT 67% – 100%
NECK			☒	
BACK				☒
SHOULDERS		☒		
ELBOWS		☒		
HAND / WRIST / FINGERS				☒
LEGS		☒		
CARDIOVASCULAR		☒ Room Checks		



JOB ROLE PROFILE

BAR/RETAIL UTILITY

WORK / REST PATTERNS	10-12 hours per day		
USUAL PHYSICAL TASKS	CASH HANDLING	MOP APPROX 6 HRS PER DAY	PREPARE FOOD/FUNCTIONS
	CLEAN APPLIANCES	MOVE ELECTRIC	RECYCLING
	CLEAN FRIDGES	PALLET JACK	MANAGEMENT
	CLEAN PATHWAYS	MOVE / EMPTY	STOCK ICE WELLS
	CLEAN SURFACES	GREEN BINS	STOCK ROTATION
	CLEAN TOILETS	MOVE / STACK	STOCK SHELVES / COOL ROOMS
	DISPENSE CHEMICALS	FURNITURE	SWEEP
	DRIVE BUGGY	MOVE TROLLEY INCL. ICE WELLS, PALLET JACK	USE GLASS CRUSHER
	DRIVE VEHICLE	PICK UP RUBBISH	WIND HOSE REEL
	EMPTY DESK DUSTBINS	PREPARE COFFEE	
	LOAD / UNLOAD		
	PALLETS/STOCK		
	PHYSICAL DEMAND LEVEL	MEDIUM – HEAVY. See WORK ATTRIBUTES and BODY DEMANDS table below.	
PHYSICAL RISK FACTORS	Fatigue Repetition Forceful exertion Awkward postures		
TOOLS	Bottle openers Box cutter Broom Buckets Mop Pallet Jack – manual and electric Paper towel Cleaning cloths Squeegee Trolley Vacuum Blower Vacuum High pressure hose		
GRIP TYPE	Flat fist	Cylindrical	Thumb/finger grip
	Fingertip grip	Three point grip	Power grip
HANDLING REQUIREMENTS	Varied size and frequency. CONSTANTLY: Glasses Cans Bottles Boxes Stacking Shelves Beware of pinch points		
FORCE EXERTION	15 – 16kg – occasional/frequent furniture Up to 21kg cartons/boxes – floor – shoulder variations.		
	EQUIPMENT	FORCE REQUIRED TO MOVE	
		PUSH	PULL
		Ice wells (full with ice & stubbies)	20kg
ENVIRONMENTAL FACTORS	Large camp area / large work area Uneven ground Variable weather-dust, heat, extreme heat, humidity, rain, sun, wind, mud Remote/isolated location Limited medical facilities Cold – cool room Slip hazards Small workspaces Human traffic Trip hazards Glass/sharps Noise		
PPE	Hi-Vis long sleeves and long pants Safety boots Safety glasses Hearing protection Freezer jacket Hat Apron Face shield Black long sleeves and long pants Gloves - manual handling, disposable, rubber		
CONTROLS	Hazard/Risk assessment procedures Trolleys Bin lifter		
HEIGHTS	N/A		
HYGIENE EXPOSURES	Dirty/contaminated toilets/facility Body fluids Cross contamination – food/rubbish handling		

JOB ROLE PROFILE CONTINUED

BAR/RETAIL UTILITY

WORK ATTRIBUTES: POSTURES / PHYSICAL DEMANDS / REACHING

	WEIGHT	NEVER 0%	OCCASIONAL 1% – 33%	FREQUENT 34% – 66%	CONSTANT 67% – 100%
SIT		☒			
WALK including uneven terrain and gradients					☒
STAND					☒
LOW WORK SITTING (NECK STOOP)		☒			
LOW WORK STANDING (BACK STOOP)		☒			
STAIR CLIMB			☒		
LADDER CLIMB			☒ Safety Step		
BALANCE		☒			
KNEEL				☒	
CRAWL		☒			
CROUCH/LOW SQUAT				☒	
SQUAT				☒	
REACH FORWARD					☒
REACH OVERHEAD			☒		
SUSTAINED WORK – BELOW KNEE					☒
SUSTAINED WORK – ABOVE SHOULDERS		☒			
UPPER LIMB REPETITIVE ACTION					☒
UNILATERAL CARRY	5kg -10kg		☒ (5kg)	☒ (10kg)	
BILATERAL CARRY	15kg		☒		
PULL / PUSH					☒
LIFT TO WAIST HEIGHT	10kg				☒
LIFT TO WAIST HEIGHT	15kg				☒
LIFT TO SHOULDER / EYE LEVEL	2kg			☒	
LIFT TO SHOULDER / EYE LEVEL	5kg			☒	
LIFT - OTHER WAIST TO WAIST	5kg				☒
HAND DEXTERITY					☒
GRIPPING					☒
OVERHEAD LYING DOWN		☒			
TRUNK ROTATION STANDING				☒	
TRUNK ROTATION SITTING		☒			
OTHER – Looking down				☒	

JOB ROLE PROFILE CONTINUED

BAR/RETAIL UTILITY

BODY DEMANDS

	NEVER 0%	OCCASIONAL 1% – 33%	FREQUENT 34% – 66%	CONSTANT 67% – 100%
NECK				☒
BACK				☒
SHOULDERS				☒
ELBOWS			☒	
HAND / WRIST / FINGERS				☒
LEGS				☒
CARDIOVASCULAR				☒



JOB ROLE PROFILE

CHEF

WORK / REST PATTERNS 10-12 hours per day

USUAL PHYSICAL TASKS	ADMIN. TASKS / PAPERWORK CLEAN APPLIANCES CLEAN BAIN MARIES CLEAN FREEZERS CLEAN FRIDGES CLEAN FRYERS CLEAN OVENS CLEAN SURFACES COMPUTER DUTIES HEAD AND SOUS CHEFS COOK - HOTPLATE / STOVE / FRYER DISPENSE CHEMICALS DRIVE VEHICLE HEAD AND SOUS CHEFS	HAND WORK - PASTRY & DOUGH KNIFE WORK LOAD & OPERATE COLD MEAT SLICER LOAD / UNLOAD BAIN MARIES LOAD / UNLOAD COLD WELLS LOAD / UNLOAD INDUSTRIAL MIXER LOAD / UNLOAD PALLETS/STOCK LOAD / UNLOAD PIE FREEZERS LOAD TRAY TROLLEY	MOP MOVE POTS/PANS MOVE TROLLEY MOVE TUBS OF FOOD MOVE / EMPTY GREEN BINS PEEL VEGETABLES PICK UP RUBBISH STOCK SHELVES / COOL ROOMS / FREEZERS USE CAN OPENER USE FOOD SLICER USE OFFICE EQUIPMENT USE PHONE/RADIO HEAD AND SOUS CHEFS WIND HOSE REEL
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PHYSICAL DEMAND LEVEL **HEAVY**. See **WORK ATTRIBUTES** and **BODY DEMANDS** table below.

PHYSICAL RISK FACTORS Fatigue | Repetition | Forceful exertion | Awkward postures

TOOLS Paddle | Tongs | Spatulas | Scraper | Spoons | Knives | Blenders | Whisks
Squeegee | Broom | Mop | Scrubbing brush | Can opener | Food slicer
Cooking appliances | Pots & pans | Cloths | Manual pallet jack

GRIP TYPE Cylindrical Pinch Knife
Claw Power grip Lumbrical/flat grip

HANDLING REQUIREMENTS Varied size and frequency.
CONSTANTLY: Kitchen utensils and cooking actions

FORCE EXERTION Removing oven trolley 20-25kg push / pull
Lifting up to 30-40kg floor – waist height. Up to 25 kg to shoulder height
Reach 360mm to 900mm to overhead shelves.

EQUIPMENT	FORCE REQUIRED TO MOVE	
	PUSH	PULL
Cold wells (empty) moved for deep cleaning	5kg per person	-
Plate trolley (loaded)	8kg	10kg
Drain cover (use of tool) lifted for cleaning	-	up to 20kg
Single tray trolley (half-filled)	up to 5kg	up to 5kg
Double tray trolley (empty)	5kg	7kg
Double tray trolley (full)	18kg	15kg
Industrial dishwasher	8kg open overhead	(minimal to close)
Potwash machine	10kg open overhead	13kg from overhead
Cool room / Freezer / De-frost doors	up to 25kg to slide open push OR pull	
	up to 15kg to slide close push OR pull	

JOB ROLE PROFILE CONTINUED

CHEF

ENVIRONMENTAL FACTORS	Large camp area / large work area Uneven ground Variable weather-dust, heat, extreme heat, humidity, rain, sun, wind, mud Remote/isolated location Limited medical facilities Heat – kitchen Cold – freezer/cool room Chemicals Slip hazards Trip hazards Steam Human traffic Small workspaces Noise
PPE	Gloves - cut resistant, chain mesh, disposable, manual handling, rubber, white cotton Safety boots Hat Heat mitt Apron Respirator Goggles Hearing protection Safety glasses Beard net Hair net Hardhat Hi Vis clothing – as required Black long sleeves and long pants
CONTROLS	Food processor Industrial dishwasher Power soak machine Pot wash machine Oven Brat pan Stick blender Robocoupe Food slicer Pallet Jack Industrial mixer Soup kettle Hazard/Risk assessment procedures Trolleys Trigger spray hose reel (retractable) Pre-rinse trigger spray hose
HEIGHTS	N / A
HYGIENE EXPOSURES	Cross contamination – food/rubbish handling

JOB ROLE PROFILE CONTINUED

CHEF

WORK ATTRIBUTES: POSTURES / PHYSICAL DEMANDS / REACHING

	WEIGHT	NEVER 0%	OCCASIONAL 1% – 33%	FREQUENT 34% – 66%	CONSTANT 67% – 100%
SIT		☒			
WALK including uneven terrain and gradients					☒
STAND					☒
LOW WORK SITTING (NECK STOOP)		☒			
LOW WORK STANDING (BACK STOOP)			☒		
STAIR CLIMB		☒			
LADDER CLIMB			☒ Safety Step		
BALANCE			☒		
KNEEL		☒			
CRAWL		☒			
CROUCH/LOW SQUAT			☒		
SQUAT		☒			
REACH FORWARD				☒	
REACH OVERHEAD			☒		
SUSTAINED WORK – BELOW KNEE		☒			
SUSTAINED WORK – ABOVE SHOULDERS		☒			
UPPER LIMB REPETITIVE ACTION					☒
UNILATERAL CARRY	3-10kg			☒	
BILATERAL CARRY	15kg			☒	
PULL / PUSH				☒	
LIFT TO WAIST HEIGHT	30-40kg			☒	
LIFT TO WAIST HEIGHT	20kg			☒	
LIFT TO WAIST HEIGHT	30-40kg (team lift = 17-23kg each)			☒	
LIFT TO SHOULDER / EYE LEVEL	8-9kg		☒		
LIFT - Other Knee to Waist Level	4-9kg			☒	
HAND DEXTERITY					☒
GRIPPING				☒	
OVERHEAD LYING DOWN		☒			
TRUNK ROTATION STANDING				☒	
TRUNK ROTATION SITTING		☒			
OTHER					

JOB ROLE PROFILE CONTINUED

CHEF

BODY DEMANDS

	NEVER 0%	OCCASIONAL 1% – 33%	FREQUENT 34% – 66%	CONSTANT 67% – 100%
NECK				☒
BACK		☒		
SHOULDERS			☒	
ELBOWS		☒		
HAND / WRIST / FINGERS				☒
LEGS				☒
CARDIOVASCULAR		☒		☒ Truck Day



JOB ROLE PROFILE

GROUNDS UTILITY

WORK / REST PATTERNS	10-12 hours per day		
USUAL PHYSICAL TASKS	ADMIN. TASKS / PAPERWORK ANIMAL HANDLING AGRI. SPRAYING CLEAN BARBECUES CLEAN EXTERNAL BUILDING SURFACES CLEAN PATHWAYS CLEAN POOL CLEAN SURFACES DIGGING DISPENSE CHEMICALS DRAGGING BRANCHES DRIVE BUGGY DRIVE VEHICLE FILL GAS BOTTLES LOAD / UNLOAD PALLET/STOCK INCL. TOOLS/EQUIP LOWERING BRANCHES MAINT. – CHANGE DOOR LOCKS	MAINT. - RETICULATION MAINT. - SHOWER HEADS MAINT. – SWIMMING POOL MAINT. - TAPS MAINT. - TOILETS MAINT. – USE VEHICLE JACK MAINT. – WHEELS ON TROLLEY/BIN MOVE ELECTRIC PALLET JACK MOVE / EMPTY GREEN BINS MOVE / STACK FURNITURE MOVE MANUAL PALLET JACK MULCHING PAINTING PICK UP RUBBISH	PRUNING RAKING RECYCLING MANAGEMENT RE-FUEL VEHICLE INCL. EQUIPMENT REPAIR FOOTPATH STUMP GRINDING SWEEP USE BOBCAT & FORKLIFT USE CHAINSAW USE CHIPPER / MULCHER USE POLESAW USE PHONE/RADIO USE RIDE ON MOWER USE WHIPPER SNIPPER/BRUSH CUTTER WEEDING WIND HOSE REEL WORK ON EWP
PHYSICAL DEMAND LEVEL	HEAVY – VERY HEAVY. See WORK ATTRIBUTES and BODY DEMANDS table below.		
PHYSICAL RISK FACTORS	Fatigue Repetition Forceful exertion Awkward postures		
TOOLS	Chainsaw Lawn mower – powered, manual, ride-on Whipper snipper/Brush cutter Back pack weed sprayer Blower Rakes Bob cat Forklift Reticulation Wrenches Pipe cutter Hand saws Pole saw Broom Gurney Hoses Bolt cutter Pallet jacks – auto and manual Secateurs/pruning shears Shovels Crowbar Mattock Rubbish picker Snake handling equipment Pliers Box cutter Rubbish compacters / baler Bin lifter – manual and auto Manual hand pump Scoop net Auto pool cleaner / vacuum Pool broom Various power tools and small hand tools Water sampler Chemicals Paint Aerosol cans Spray / squeeze bottles Broom Dustpan Polesaw Computer Vehicle/s Phone / Radio Chipper / Mulcher Traffic cones Air compressor Electric charger Lighting Extension cords Stake driver Axe/splitter Hammers Garden fork Gas bottles Spreader Ropes Tie downs Tarpaulins Brushes Weeding fork/tools Paper towel Cleaning cloths Toolboxes Wheelbarrow		
GRIP TYPE	Flat fist Finger Tip Grip	Power grip Three point grip	Cylindrical
HANDLING REQUIREMENTS	Variable size and frequency. Constant – driving, using tools / controls, dispensing chemicals, rubbish handling. Frequent gripping/handling various tools and cleaning equipment		

JOB ROLE PROFILE CONTINUED

GROUNDS UTILITY

FORCE EXERTION	Up to 20 kg maximum lift (lawn mower, bin bags, boxes, chainsaw) Heavy lifts of up to 25kg – branches, trailers, chainsaws, tools, mulch Frequent up to 10-15kg
ENVIRONMENTAL FACTORS	Large camp area / large work area Uneven ground Variable weather- dust, heat, extreme heat, humidity, rain, sun, wind, mud Remote/isolated location Limited medical facilities Chemicals Wildlife Machinery Noise Contamination Visibility Roads Heights Plant matter Rubbish Pests Electricity
PPE	Hardhat Safety glasses Gloves – manual handling, heavy duty/leather, rubber Double hearing protection Goggles Face shield Fly nets Sun hat Safety boots Rubber boots Apron Chaps Dust mask Hi-Vis long sleeves and long pants Harness Enteric reel Ropes Slings Pulley Bio-hazard suit Sunscreen
CONTROLS	EWP Lawn mowers Whipper snipper/Brush cutter Weed spray Blower Rake Bob cat Forklift Reticulation Various power tools and hand tools Pipe cutter Pole saw Chainsaw Pool cleaner (auto) Vehicle/s Phone/Radio Stump grinder Trailer Chipper / Mulcher Hazard / Risk assessment procedures
HEIGHTS	Yes
HYGIENE EXPOSURES	Chemicals Wildlife (including snake handling) Pests Contamination Body fluids Rubbish Dust

JOB ROLE PROFILE CONTINUED

GROUNDS UTILITY

WORK ATTRIBUTES: POSTURES / PHYSICAL DEMANDS / REACHING

	WEIGHT	NEVER 0%	OCCASIONAL 1% – 33%	FREQUENT 34% – 66%	CONSTANT 67% – 100%
SIT			☒		
WALK including uneven terrain and gradients					☒
STAND					☒
LOW WORK SITTING (NECK STOOP)			☒ sitting on ground		
LOW WORK STANDING (BACK STOOP)					☒
STAIR CLIMB			☒		
LADDER CLIMB			☒		
BALANCE					☒
KNEEL				☒	
CRAWL		☒			
CROUCH/LOW SQUAT				☒	
SQUAT				☒	
REACH FORWARD					☒
REACH OVERHEAD					☒
SUSTAINED WORK – BELOW KNEE					☒
SUSTAINED WORK – ABOVE SHOULDERS		☒			
UPPER LIMB REPETITIVE ACTION					☒
UNILATERAL CARRY	5kg				☒
BILATERAL CARRY	8kg				☒
PULL / PUSH					☒
LIFT TO WAIST HEIGHT	60-70kg (team lift)			☒	
LIFT TO WAIST HEIGHT	30kg				☒
LIFT TO WAIST HEIGHT	5-10kg				☒
LIFT TO SHOULDER / EYE LEVEL	5-10kg			☒	
LIFT - Other Waist to waist	10-25kg			☒	
HAND DEXTERITY					☒
GRIPPING					☒
OVERHEAD LYING DOWN				☒ sustained	
TRUNK ROTATION STANDING					☒
TRUNK ROTATION SITTING					☒
OTHER			☒ Safety Step		
REACHING SIDEWAYS					☒
LOAD/UNLOAD MOWER	30-40kg (team lift = 17-23kg each)			☒	



JOB ROLE PROFILE CONTINUED

BODY DEMANDS

GROUNDS UTILITY

	NEVER 0%	OCCASIONAL 1% – 33%	FREQUENT 34% – 66%	CONSTANT 67% – 100%
NECK			☒	
BACK				☒
SHOULDERS		☒		
ELBOWS		☒		
HAND / WRIST / FINGERS				☒
LEGS		☒		
CARDIOVASCULAR		☒		



JOB ROLE PROFILE		HEALTH, SAFETY & ENVIRONMENT COORDINATOR (HSEC)		
WORK / REST PATTERNS	10-12 hours per day			
USUAL PHYSICAL TASKS	ADMIN. TASKS / PAPERWORK COMPUTER DUTIES DRIVE VEHICLE	LOAD / UNLOAD PALLETS/STOCK PERFORM ROOM CHECKS	PICK UP RUBBISH RE-FUEL VEHICLE USE OFFICE EQUIPMENT USE PHONE/RADIO	
PHYSICAL DEMAND LEVEL	SEDENTARY – LIGHT – MEDIUM. See WORK ATTRIBUTES and BODY DEMANDS table below.			
PHYSICAL RISK FACTORS	Fatigue Repetition Forceful exertion Awkward postures			
TOOLS	Computer Desk Chair Phone Office equipment Photocopier All equipment in work area as required e.g. safe handling demonstrations, truck day.			
GRIP TYPE	Flat fist Fingertip grip Pinch	Three point grip Computer mouse Pen	Cylindrical	
HANDLING REQUIREMENTS	Frequent computer usage. Occasional phone / radio, walking and general demonstrations.			
FORCE EXERTION	Force and load generally within 0 – 10kg. Can increase to 20kg if assisting other departments or demonstrating.			
ENVIRONMENTAL FACTORS	Large camp area / large work area Uneven ground Variable weather- dust, heat, extreme heat, humidity, rain, sun, wind, mud Remote/isolated location Limited medical facilities Weather Ergonomics			
PPE	Hi-Vis long sleeves and long pants Standard PPE as required by task, e.g. gloves (all types), glasses, masks, hearing protection, hair net, hardhat, freezer jacket			
CONTROLS	Computer Phone/Radio Vehicle Hazard/Risk assessment procedures			
HEIGHTS	N/A			
HYGIENE EXPOSURES	Dirty/contaminated rooms Pests Wildlife (may include snake handling)			

JOB ROLE PROFILE CONTINUED

HSEC

WORK ATTRIBUTES: POSTURES / PHYSICAL DEMANDS / REACHING

	WEIGHT	NEVER 0%	OCCASIONAL 1%-33%	FREQUENT 34%-66%	CONSTANT 67%-100%
SIT					☒
WALK including uneven terrain and gradients				☒	
STAND				☒	
LOW WORK SITTING (NECK STOOP)		☒			
LOW WORK STANDING (BACK STOOP)		☒			
STAIR CLIMB			☒		
LADDER CLIMB		☒			
BALANCE		☒			
KNEEL		☒			
CRAWL		☒			
CROUCH/LOW SQUAT		☒			
SQUAT		☒			
REACH FORWARD					☒
REACH OVERHEAD		☒			
SUSTAINED WORK – BELOW KNEE		☒			
SUSTAINED WORK – ABOVE SHOULDERS		☒			
UPPER LIMB REPETITIVE ACTION			☒		
UNILATERAL CARRY	2-5kg		☒		
BILATERAL CARRY	2-5kg		☒		
PULL / PUSH		☒			
LIFT TO WAIST HEIGHT					
LIFT TO SHOULDER / EYE LEVEL					
LIFT - Other					
HAND DEXTERITY				☒	
GRIPPING			☒		
OVERHEAD LYING DOWN		☒			
TRUNK ROTATION STANDING		☒			
TRUNK ROTATION SITTING			☒		
OTHER					

JOB ROLE PROFILE CONTINUED

HSEC

BODY DEMANDS

	NEVER 0%	OCCASIONAL 1% – 33%	FREQUENT 34% – 66%	CONSTANT 67% – 100%
NECK		☒		
BACK		☒		
SHOULDERS		☒		
ELBOWS		☒		
HAND / WRIST / FINGERS				☒
LEGS			☒	
CARDIOVASCULAR	☒			



JOB ROLE PROFILE

HEALTH & LIFESTYLE COORDINATOR (HLC)

WORK / REST PATTERNS	10-12 hours per day		
USUAL PHYSICAL TASKS	ADMIN. TASKS / PAPERWORK CLEAN APPLIANCES CLEAN GYM EQUIPMENT CLEAN PIGEON HOLES CLEAN SURFACES COMPUTER DUTIES DECORATE DINING ROOM / SET UP EVENTS DRIVE BUGGY	DRIVE VEHICLE EMPTY DESK DUSTBINS LOAD / UNLOAD PALLET/STOCK INCL. INSTALLING GYM EQUIPMENT MOP MOVE / STACK FURNITURE MOVE TROLLEY	PERFORM ROOM CHECKS INCL. FACILITIES RE-FUEL VEHICLE RUN GROUP FITNESS CLASSES INCL. PRE-START STRETCHES & WORK HARDENING PROGRAMMES SWEEP USE OFFICE EQUIPMENT USE PHONE/RADIO VACUUM
PHYSICAL DEMAND LEVEL	HEAVY – VERY HEAVY. See WORK ATTRIBUTES and BODY DEMANDS table below.		
PHYSICAL RISK FACTORS	Fatigue Repetition Forceful exertion Awkward postures		
TOOLS	Various small hand tools Toolbox Computer		
GRIP TYPE	Computer mouse Flat fist Fingertip grip	Cylindrical Pen Three point grip	Pinch Power grip
HANDLING REQUIREMENTS	Varied size and frequency. FREQUENT: Computer usage, walking OCCASIONAL: Phone/Radio		
FORCE EXERTION	Required to lift/clean items sporadically up to 25kgs. Can be required to assist unloading pallets. (Lifting items up to 20kg from floor to waist, waist to waist and shoulder height)		
ENVIRONMENTAL FACTORS	Large camp area / large work area Uneven ground Variable weather-dust, heat, extreme heat, humidity, rain, sun, wind, mud Remote/isolated location Limited medical facilities Slip hazards Trip hazards		
PPE	Safety boots Sports shoes Black polo shirt and shorts Hardhat Hair net Hi Vis clothing - as required Safety glasses Gloves – manual handling, disposable Hat		
CONTROLS	Computer Phone/Radio Trolleys Hazard/Risk assessment procedures		
HEIGHTS	N / A		
HYGIENE EXPOSURES	Body fluids Cross contamination – food/rubbish handling		



JOB ROLE PROFILE CONTINUED

HLC

WORK ATTRIBUTES: POSTURES / PHYSICAL DEMANDS / REACHING

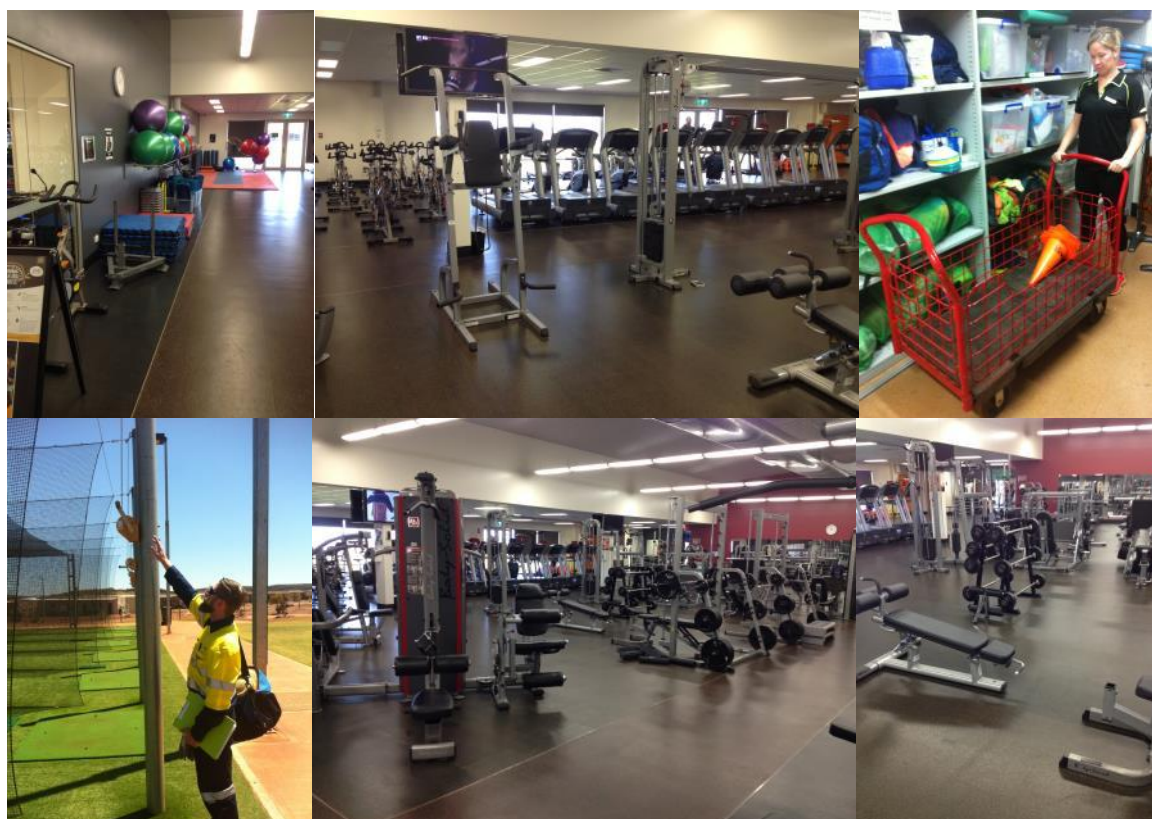
	WEIGHT	NEVER 0%	OCCASIONAL 1% – 33%	FREQUENT 34% – 66%	CONSTANT 67% – 100%
SIT				☒	
WALK including uneven terrain and gradients			☒		
STAND			☒		
LOW WORK SITTING (NECK STOOP)			☒		
LOW WORK STANDING (BACK STOOP)			☒		
STAIR CLIMB		☒			
LADDER CLIMB			☒ (Safety step)		
BALANCE			☒		
KNEEL			☒		
CRAWL			☒		
CROUCH/LOW SQUAT			☒		
SQUAT				☒	
REACH FORWARD				☒	
REACH OVERHEAD				☒	
SUSTAINED WORK – BELOW KNEE			☒		
SUSTAINED WORK – ABOVE SHOULDERS		☒			
UPPER LIMB REPETITIVE ACTION		☒			
UNILATERAL CARRY	1-40kg		☒		
BILATERAL CARRY	20-25kg			☒	
PULL / PUSH	1-100kg			☒	
LIFT TO WAIST HEIGHT	2-20kg			☒	
LIFT TO WAIST HEIGHT	25kg		☒		
LIFT TO SHOULDER / EYE LEVEL	25kg		☒		
LIFT - Other Lift To Overhead	10kg		☒		
HAND DEXTERITY				☒	
GRIPPING				☒	
OVERHEAD LYING DOWN			☒		
TRUNK ROTATION STANDING			☒		
TRUNK ROTATION SITTING		☒			
OTHER Reaching Below Knees				☒	

JOB ROLE PROFILE CONTINUED

HLC

BODY DEMANDS

	NEVER 0%	OCCASIONAL 1% – 33%	FREQUENT 34% – 66%	CONSTANT 67% – 100%
NECK				☒
BACK			☒	
SHOULDERS			☒	
ELBOWS			☒	
HAND / WRIST / FINGERS				☒
LEGS			☒	
CARDIOVASCULAR		☒		



JOB ROLE PROFILE

HOUSEKEEPER

WORK / REST PATTERNS	10-12 hours per day		
USUAL PHYSICAL TASKS Varies depending on work area and/or work schedule: - Linen - Room cleans - Periodical cleans	ADMIN. TASKS / PAPERWORK	DISPENSE CHEMICALS	MOVE / STACK FURNITURE
	BED MAKING	DRIVE BUGGY	MOVE TROLLEY INCL. MANUAL PALLET JACK
	BED STRIPPING	DRIVE VEHICLE	PICK UP RUBBISH
	CLEAN A/C FILTERS	DUSTING	RE-FUEL VEHICLE
	CLEAN APPLIANCES	EMPTY DESK DUSTBINS	STOCK SHELVES
	CLEAN EXHAUST FANS	FOLD & SORT LINEN	STRIP AND SEAL FLOORS
	CLEAN PATHWAYS	LOAD / UNLOAD / COLLECT LINEN	SWEEP
	CLEAN SHOWERS	LOAD / UNLOAD PALLETS / STOCK	USE PHONE/RADIO
	CLEAN SURFACES	MOP	VACUUM
	CLEAN TOILETS	MOVE ELECTRIC TROLLEY	
	COMPUTER DUTIES		
PHYSICAL DEMAND LEVEL	MEDIUM – HEAVY – VERY HEAVY. See WORK ATTRIBUTES and BODY DEMANDS table below.		
PHYSICAL RISK FACTORS	Fatigue Repetition Forceful exertion Awkward postures		
TOOLS	Cleaning cloths Doodle bug Mop Broom Spray bottle Bucket Brushes Linen bag Linen/stock trolley Cage trolley Scourer Toilet brush Paper towel Dustpan Portable hose (tap attachment) Jug Squeegee Phone/Radio Bin liner Feather duster		
GRIP TYPE	Flat fist Fingertip grip	Power grip Three point grip	Cylindrical Flat hand (wiping)
HANDLING REQUIREMENTS	Varied size and frequency. CONSTANTLY: Cleaning Changing sheets Transferring amenities Sweeping Mopping Lifting Changing bin liners Vacuuming		
FORCE EXERTION	15kg mattress 20kg linen bag 10kg push/pull		
ENVIRONMENTAL FACTORS	Large camp area / large work area Uneven ground Variable weather- dust, heat, extreme heat, humidity, rain, sun, wind, mud Remote/isolated location Limited medical facilities Small workspaces Personal quarters – uncontrolled slip / trip hazards Wildlife		
PPE	Hi-Vis long sleeves and long pants Safety glasses Hat Safety boots Gloves – disposable, manual handling, white cotton, rubber Respirator Goggles Apron Kneepads		
CONTROLS	Phone/Radio Floor scrubber Stripper and sealer Fringe mop/scissor sweeper Electric trolley pallet jack - manual Cage (linen) trolley Linen/stock trolley Vehicle Buggy Fringe mop/broom Vacuum Chemicals Hazard/Risk assessment procedures		
HEIGHTS	N / A		
HYGIENE EXPOSURES	Body fluids Rubbish Dirty/contaminated rooms/toilets/showers Cross contamination – clean/soiled linen		

JOB ROLE PROFILE CONTINUED

HOUSEKEEPER

WORK ATTRIBUTES: POSTURES / PHYSICAL DEMANDS / REACHING

	WEIGHT	NEVER 0%	OCCASIONAL 1% – 33%	FREQUENT 34% – 66%	CONSTANT 67% – 100%
SIT			☒		
WALK including uneven terrain and gradients					☒
STAND					☒
LOW WORK SITTING (NECK STOOP)		☒			
LOW WORK STANDING (BACK STOOP)				☒	
STAIR CLIMB		☒			
LADDER CLIMB			☒ Safety Step		
BALANCE				☒	
KNEEL			☒ (depends on choice/set up)		
CRAWL		☒			
CROUCH/LOW SQUAT					☒
SQUAT				☒	
REACH FORWARD				☒	
REACH OVERHEAD			☒		
SUSTAINED WORK – BELOW KNEE			☒		
SUSTAINED WORK – ABOVE SHOULDERS			☒		
UPPER LIMB REPETITIVE ACTION					☒
Unilateral CARRY	10kg		☒		
Bilateral CARRY	5kg				☒
PULL / PUSH				☒	
LIFT TO WAIST HEIGHT	5-20kg from floor		☒		
LIFT TO WAIST HEIGHT	10kg		☒		
LIFT TO SHOULDER / EYE LEVEL	5-10kg from waist				☒
LIFT - Other Above shoulder height with safety step	5kg		☒		
HAND DEXTERITY					☒
GRIPPING					☒
OVERHEAD LYING DOWN		☒			
TRUNK ROTATION STANDING				☒	
TRUNK ROTATION SITTING		☒			
OTHER					

JOB ROLE PROFILE CONTINUED

HOUSEKEEPER

BODY DEMANDS

	NEVER 0%	OCCASIONAL 1% – 33%	FREQUENT 34% – 66%	CONSTANT 67% – 100%
NECK			☒	
BACK			☒	
SHOULDERS				☒
ELBOWS		☒		
HAND / WRIST / FINGERS				☒
LEGS				☒ Feet
CARDIOVASCULAR				☒



JOB ROLE PROFILE

KITCHEN UTILITY | DINING/CATERING UTILITY

WORK / REST PATTERNS	10-12 hours per day		
USUAL PHYSICAL TASKS Varies depending on work area: - Kitchen - Dining/Catering	ADMIN. TASKS / PAPERWORK CLEAN APPLIANCES CLEAN BAIN MARIES CLEAN COLD WELLS CLEAN DRAINS CLEAN FRIDGES CLEAN FREEZERS CLEAN FRYERS CLEAN OVENS CLEAN RANGEHOODS CLEAN SURFACES COMPUTER DUTIES DECORATE DINING ROOM / SET UP FUNCTIONS DISPENSE CHEMICALS DISPOSE EXCESS FOOD DRIVE VEHICLE	EMPTY DESK DUSTBINS HAND WORK PASTRY & DOUGH KNIFE WORK LOAD & OPERATE COLD MEAT SLICER LOAD / UNLOAD PALLETS/STOCK LOAD F&B DISPENSERS LOAD POTATO RUMBLER LOAD TRAY TROLLEY LOAD / UNLOAD COLD WELLS LOAD / UNLOAD PIE FREEZERS LOAD / USE / UNLOAD IND'L DISHWASHER MOP MOVE / EMPTY GREEN BINS MOVE TUBS OF FOOD	MOVE / STACK FURNITURE MOVE POTS/PANS MOVE TROLLEY PEEL VEGETABLES PREPARE FOOD/FUNCTIONS RECYCLING MANAGEMENT RINSE CROCKERY & CUTLERY SCRUB POTS & PANS STOCK ROTATION STOCK SHELVES / COOL ROOMS / FREEZERS SWEEP USE CAN OPENER USE FLOOR SCRUBBER USE FOOD SLICER USE OFFICE EQUIPMENT VACUUM WIND HOSE REEL
 PHYSICAL DEMAND LEVEL	HEAVY – VERY HEAVY. See WORK ATTRIBUTES and BODY DEMANDS table below.		
PHYSICAL RISK FACTORS	Fatigue Repetition Forceful exertion Awkward postures		
TOOLS	Scourer Knives Spray bottles Cleaning cloths Sponge Scraper Spray hoses Plate trays Cutlery trays Floor scrubber Broom Plate trolley Squeegee Doodlebug		
GRIP TYPE	Flat wrist Fingertip grip	Cylindrical Three point grip	Power grip Thumb pinch
HANDLING REQUIREMENTS	Varied size and frequency. CONSTANT: Handling kitchen utensils and crockery, wiping/scrubbing and forward reaching cleaning actions, push/pull trolleys FREQUENT: Cooking actions.		

JOB ROLE PROFILE CONTINUED
**KITCHEN UTILITY
DINING/CATERING UTILITY**
FORCE EXERTION

Lift up to 20-25kg floor to waist / waist to waist / waist to shoulder
 Frequent lift 15kg boxes of fruit or beverages | 18 kg milk crates
 Reach 360mm to 900mm to overhead shelves.

EQUIPMENT	FORCE REQUIRED TO MOVE	
	PUSH	PULL
Cold wells (empty) moved for deep cleaning	5kg per person	-
Plate trolley (loaded)	8kg	10kg
Drain cover (use of tool) lifted for cleaning	-	up to 20kg
Single tray trolley (half-filled)	up to 5kg	up to 5kg
Double tray trolley (empty)	5kg	7kg
Double tray trolley (full)	18kg	15kg
Industrial dishwasher	8kg open overhead	(minimal to close)
Potwash machine	10kg open overhead	13kg from overhead
Cool room / Freezer / De-frost doors	up to 25kg to slide open push or pull	
	up to 15kg to slide close push or pull	

ENVIRONMENTAL FACTORS

Large camp area / large work area | Uneven ground | Variable weather- dust, heat, extreme heat, humidity, rain, sun, wind, mud
 Remote/isolated location | Limited medical facilities | Heat – kitchen
 Cold – freezer/cool room | Chemicals | Slip hazards | Trip hazards
 Steam | Human traffic | Small workspaces | Noise

PPE

Safety boots | Black long sleeves and long pants | Hi Vis clothing - as required | Safety glasses | Gloves – chain mesh, cut resistant, rubber, manual handling, disposable, white cotton | Hat | Safety glasses
 Waterproof PVC apron | Rubber boots | Hearing protection | Respirator
 Hair net

CONTROLS

Pre-rinse trigger spray hose | Brat pans | Industrial dishwasher | Trigger spray hose reel (retractable) | Power soak machine | Potwash machine
 Hazard/Risk assessment procedures | Food slicer | Trolleys
 Floor scrubber | Can opener

HEIGHTS

N / A

HYGIENE EXPOSURES

Cross contamination – food/rubbish handling

JOB ROLE PROFILE CONTINUED

KITCHEN UTILITY

WORK ATTRIBUTES: POSTURES / PHYSICAL DEMANDS / REACHING

DINING / CATERING UTILITY

	WEIGHT	NEVER 0%	OCCASIONA L 1% – 33%	FREQUENT 34% – 66%	CONSTANT 67% – 100%
SIT			☒		
WALK including uneven terrain and gradients					☒
STAND					☒
LOW WORK SITTING (NECK STOOP)		☒			
LOW WORK STANDING (BACK STOOP)			☒		
STAIR CLIMB			☒		
LADDER CLIMB			☒ Safety Step		
BALANCE		☒			
KNEEL			☒		
CRAWL		☒			
CROUCH/LOW SQUAT				☒	
SQUAT				☒	
REACH FORWARD					☒
REACH OVERHEAD				☒	
SUSTAINED WORK – BELOW KNEE		☒			
SUSTAINED WORK – ABOVE SHOULDERS			☒ cleaning dishwasher		
UPPER LIMB REPETITIVE ACTION					☒
UNILATERAL CARRY	Up to 18kg (team lift = 11kg ea)			☒ milk crates (team lift)	☒ 5kg during service
BILATERAL CARRY	up to 18kg		☒ 18kg milk crates	☒ 2-5kg	☒ 7-8kg during service
PULL / PUSH					☒
LIFT WAIST HEIGHT	Up to 18kg			☒ 18kg	☒ 5, 8, 10, 15kg
LIFT FLOOR TO WAIST HEIGHT	5kg				☒
LIFT TO SHOULDER / EYE LEVEL	5-6kg				☒
LIFT Floor TO SHOULDER / EYE LEVEL	18kg (team lift = 11kg ea)			☒	
LIFT TO SHOULDER / EYE LEVEL	Up to 4kg		☒		
LIFT - Other - Overhead open/close potwash	10-13kg			☒	
HAND DEXTERITY					☒
GRIPPING					☒
OVERHEAD LYING DOWN		☒			
TRUNK ROTATION STANDING					☒
TRUNK ROTATION SITTING		☒			
OTHER – Overreaching				☒	
Working in Wet areas	3-4kg (wet clothing)				☒
Get in/out of vehicle				☒	

JOB ROLE PROFILE CONTINUED

KITCHEN UTILITY DINING / CATERING UTILITY

BODY DEMANDS

	NEVER 0%	OCCASIONAL 1% – 33%	FREQUENT 34% – 66%	CONSTANT 67% – 100%
NECK				☒
BACK				☒
SHOULDERS				☒
ELBOWS				☒
HAND / WRIST / FINGERS				☒
LEGS				☒
CARDIOVASCULAR			☒	



JOB ROLE PROFILE		MANAGER	
WORK / REST PATTERNS	10 – 12 hours per day		
USUAL PHYSICAL TASKS	ADMIN. TASKS / PAPERWORK COMPUTER DUTIES CASH HANDLING (BAR/RETAIL ONLY) DRIVE BUGGY DRIVE VEHICLE LOAD / UNLOAD PALLETS/STOCK MOVE TROLLEY	PERFORM ROOM CHECKS PICK UP RUBBISH STOCK SHELVES / COOL ROOMS / FREEZERS USE OFFICE EQUIPMENT USE PHONE / RADIO	TIME IN FIELD: general duties in work area as required – REFER TO TASK LISTS FOR EACH ROLE. INCLUDES SUPERVISION, TRAINING, TRUCK DAY
Varies depending on area of responsibility: - Grounds, Transport, Mine Site - Catering - Accom. & Housekeeping - Bar/Retail			
PHYSICAL DEMAND LEVEL	LIGHT – MEDIUM. See WORK ATTRIBUTES and BODY DEMANDS table below.		
PHYSICAL RISK FACTORS	Fatigue Repetition Forceful exertion Awkward postures		
TOOLS	Computer Desk Chair Phone/Radio Office equipment Vehicle All equipment in work area as required e.g. safe handling demonstrations, truck day.		
GRIP TYPE	Flat fist Fingertip grip Pinch	Power grip Three point grip Power grip	Cylindrical Computer mouse Pen
HANDLING REQUIREMENTS	Frequent computer usage. Occasional phone / radio, walking and general demonstrations - up to 15kg occasionally.		
FORCE EXERTION	Can be required to unload pallets on occasion – items up to 20kg floor to waist, waist to wait and waist to shoulder.		
ENVIRONMENTAL FACTORS	Large camp area / large work area Uneven ground Variable weather- dust, heat, extreme heat, humidity, rain, sun, wind, mud Remote/isolated location Limited medical facilities Noise Ergonomics		
PPE	Hi-Vis long sleeves and long pants Safety boots Standard PPE as required by work area, e.g. gloves (all types), glasses, masks, hearing protection		
CONTROLS	Computer Pallet jack Hazard/Risk assessment procedures Phone/Radio Vehicle		
HEIGHTS	Depending on work area – occasional use of ladder		
HYGIENE EXPOSURES	Chemicals Dust Pests Body fluids Dirty / contaminated room / toilets / facility		

JOB ROLE PROFILE CONTINUED

MANAGER

WORK ATTRIBUTES: POSTURES / PHYSICAL DEMANDS / REACHING

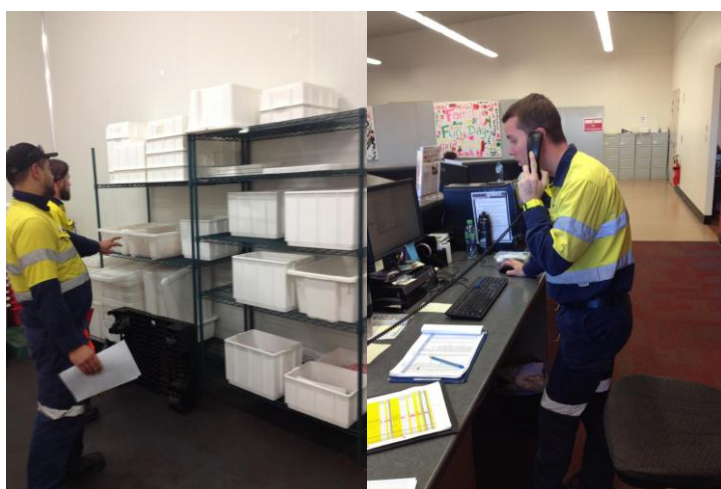
	WEIGHT	NEVER 0%	OCCASIONAL 1% – 33%	FREQUENT 34% – 66%	CONSTANT 67% – 100%
SIT					☒
WALK including uneven terrain and gradients				☒	
STAND				☒	
LOW WORK SITTING (NECK STOOP)			☒		
LOW WORK STANDING (BACK STOOP)			☒		
STAIR CLIMB			☒		
LADDER CLIMB		☒			
BALANCE		☒			
KNEEL		☒			
CRAWL		☒			
CROUCH/LOW SQUAT		☒			
SQUAT		☒			
REACH FORWARD					☒
REACH OVERHEAD			☒		
SUSTAINED WORK – BELOW KNEE		☒			
SUSTAINED WORK – ABOVE SHOULDERS		☒			
UPPER LIMB REPETITIVE ACTION			☒		
UNILATERAL CARRY	10-15kg		☒		
BILATERAL CARRY	10-15kg		☒		
PULL / PUSH		☒			
LIFT TO WAIST HEIGHT	1kg		☒		
LIFT TO WAIST HEIGHT	5kg		☒		
LIFT TO SHOULDER / EYE LEVEL	1kg		☒		
LIFT TO SHOULDER / EYE LEVEL	5kg		☒		
LIFT - Other Waist to Waist Level	10kg		☒		
HAND DEXTERITY					☒
GRIPPING					☒
OVERHEAD LYING DOWN		☒			
TRUNK ROTATION STANDING				☒	
TRUNK ROTATION SITTING				☒	
OTHER					

JOB ROLE PROFILE CONTINUED

MANAGER

BODY DEMANDS

	NEVER 0%	OCCASIONAL 1% – 33%	FREQUENT 34% – 66%	CONSTANT 67% – 100%
NECK				☒
BACK			☒	
SHOULDERS			☒	
ELBOWS			☒	
HAND / WRIST / FINGERS				☒
LEGS			☒	
CARDIOVASCULAR	☒			



JOB ROLE PROFILE
MINESITE CLEANER

WORK / REST PATTERNS	10-12 hours per day		
USUAL PHYSICAL TASKS	ADMIN. TASKS / PAPERWORK CLEAN APPLIANCES CLEAN DOMESTIC DISHWASHER CLEAN EXTERNAL BUILDING SURFACES CLEAN PATHWAYS CLEAN SHOWERS CLEAN SURFACES CLEAN TOILETS CLEAN VEHICLE COMPUTER DUTIES DISPENSE CHEMICALS	DRIVE VEHICLE DUSTING EMPTY DESK DUSTBINS FOLD & SORT LINEN LOAD / UNLOAD PALLETS/STOCK LOAD / UNLOAD / COLLECT LINEN MOP MOVE / EMPTY GREEN BINS MOVE / STACK FURNITURE MOVE TROLLEY	OPEN / CLOSE VEHICLE COMPARTMENT PICK UP RUBBISH RE-FUEL VEHICLE STOCK SHELVES STRIP AND SEAL FLOORS SWEEP USE FLOOR SCRUBBER INDOORS AND OUTDOORS USE OFFICE EQUIPMENT USE PHONE/RADIO VACUUM WIND HOSE REEL
PHYSICAL DEMAND LEVEL	HEAVY See WORK ATTRIBUTES and BODY DEMANDS table below.		
PHYSICAL RISK FACTORS	Fatigue Repetition Forceful exertion Awkward postures		
TOOLS	Feather duster Trolley Doodle bug Mop Fringe mop/scissor sweeper Broom Hose Spray bottle Squeeze bottle Bucket Brushes Dustpan Bin liner Linen tub Scourer Toilet brush Squeegee Cleaning cloths Paper towel Green bin Sponges		
GRIP TYPE	Flat fist Fingertip grip	Power grip Three point grip	Cylindrical
HANDLING REQUIREMENTS	Varied size, action and frequency. CONSTANTLY: cleaning sweeping mopping lifting changing bin liners vacuuming		
FORCE EXERTION	Max lift at any height –15kg (20kg team lift + carry).		
ENVIRONMENTAL FACTORS	Large camp area / large work area Uneven ground Variable weather- dust, heat, extreme heat, humidity, rain, sun, wind, mud Remote/isolated location Limited medical facilities Noise Rail crossings Roads Pests Fumes Mining equipment in vicinity e.g. trucks, conveyor, hot works/welding		
PPE	Hardhat Hi-Vis long sleeves and long pants Safety glasses Hat Safety boots Gloves – manual handling, rubber, disposable Fly net Goggles Dust mask Hearing protection Rain jacket		
CONTROLS	Stripper & sealer Floor scrubber Vacuum Vehicle Domestic dishwasher Phone/Radio Hazard/Risk assessment procedures		
HEIGHTS	N/A (Staircases only, often while carrying e.g. milk crate, mop bucket)		
HYGIENE EXPOSURES	Dirty/contaminated toilets/showers Body fluids Soiled linen		

JOB ROLE PROFILE CONTINUED

MINESITE CLEANER

WORK ATTRIBUTES: POSTURES / PHYSICAL DEMANDS / REACHING

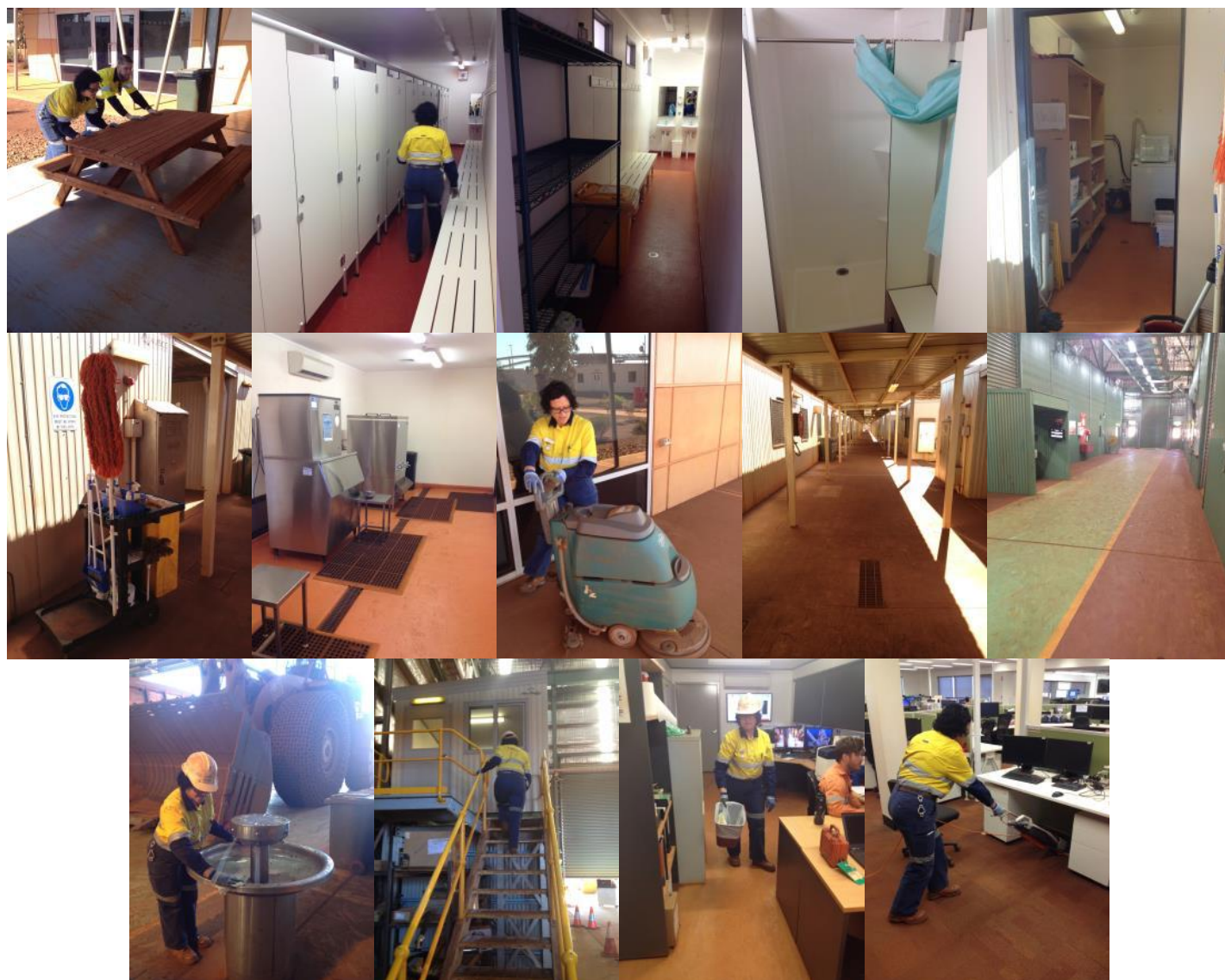
	WEIGHT	NEVER 0%	OCCASIONAL 1% – 33%	FREQUENT 34% – 66%	CONSTANT 67% – 100%
SIT			☒		
WALK including uneven terrain and gradients					☒
STAND				☒	
LOW WORK SITTING (NECK STOOP)		☒			
LOW WORK STANDING (BACK STOOP)				☒	
STAIR CLIMB				☒	
LADDER CLIMB			☒ Safety Step		
BALANCE				☒	
KNEEL			☒		
CRAWL		☒			
CROUCH/LOW SQUAT				☒	
SQUAT				☒	
REACH FORWARD					☒
REACH OVERHEAD			☒		
SUSTAINED WORK – BELOW KNEE				☒	
SUSTAINED WORK – ABOVE SHOULDERS			☒		
UPPER LIMB REPETITIVE ACTION					☒
UNILATERAL CARRY	up to 20kg (team lift = 12.5kg each)			☒	
BILATERAL CARRY	15kg		☒		
PULL / PUSH				☒	
LIFT TO WAIST HEIGHT	up to 15kg			☒	
LIFT TO WAIST HEIGHT	5-10kg		☒		
LIFT TO SHOULDER / EYE LEVEL	5-10kg		☒		
LIFT - Other					
HAND DEXTERITY					☒
GRIPPING					☒
OVERHEAD LYING DOWN		☒			
TRUNK ROTATION STANDING				☒	
TRUNK ROTATION SITTING			☒		
OTHER					

JOB ROLE PROFILE CONTINUED

MINESITE CLEANER

BODY DEMANDS

	NEVER 0%	OCCASIONAL 1% – 33%	FREQUENT 34% – 66%	CONSTANT 67% – 100%
NECK				☒
BACK				☒
SHOULDERS				☒
ELBOWS				☒
HAND / WRIST / FINGERS				☒
LEGS				☒
CARDIOVASCULAR			☒	



JOB ROLE PROFILE

STORES PERSON

WORK / REST PATTERNS	10-12 hours per day		
USUAL PHYSICAL TASKS	CLEAN APPLIANCES	LOAD FROZEN MEATS	STOCK SHELVES / COOL
	CLEAN SURFACES	INTO 20L/40L CONT.	ROOMS / FREEZERS
	CLEAN FRIDGES	MOP	SWEEP
	CLEAN FREEZERS	MOVE TROLLEY INCL.	USE FORKLIFT
	DISPENSE CHEMICALS	MANUAL PALLET JACK	USE FLOOR SCRUBBER
	DRIVE VEHICLE	MOVE ELECTRIC	USE FOOD SLICER
	LOAD / UNLOAD	PALLET JACK	WIND HOSE REEL
	PALLETS/STOCK INCL.	PICK UP RUBBISH	Assist in Catering (See
	WRAP PALLETS	STOCK ROTATION	Kitchen Utility/Dining Utility)
PHYSICAL DEMAND LEVEL	HEAVY – VERY HEAVY. See WORK ATTRIBUTES and BODY DEMANDS table below.		
PHYSICAL RISK FACTORS	Fatigue Repetition Forceful exertion Awkward postures		
TOOLS	Mop Broom Cleaning cloths Box cutter Floor scrubber Fringe mop/broom/sweeper Bucket Chemicals		
GRIP TYPE	Flat fist	Power grip	Cylindrical
	Pen grip	Fingertip grip	Three point grip
HANDLING REQUIREMENTS	Constant – loading/unloading and rotating stock, cleaning.		
FORCE EXERTION	Lift up to 20-25kg floor to waist / waist to waist / waist to shoulder		
	Floor to overhead 16kg Reach 360mm to 900mm to overhead shelves		
	EQUIPMENT	FORCE REQUIRED TO MOVE	
		PUSH	PULL
	Cold wells (empty) moved for deep cleaning	5kg per person	-
	Plate trolley (loaded)	8kg	10kg
	Drain cover (use of tool) lifted for cleaning	-	up to 20kg
	Single tray trolley (half-filled)	up to 5kg	up to 5kg
	Double tray trolley (empty)	5kg	7kg
	Double tray trolley (full)	18kg	15kg
	Industrial dishwasher	8kg open overhead	(minimal to close)
	Potwash machine	10kg open overhead	13kg from overhead
Cool room/Freezer/De-frost doors	up to 25kg to slide open push OR pull		
	up to 15kg to slide close push OR pull		
ENVIRONMENTAL FACTORS	Large camp area / large work area Uneven ground Variable weather-dust, heat, extreme heat, humidity, rain, sun, wind, mud Remote/isolated location Limited medical facilities Heat-kitchen Cold-freezer/cool room		
PPE	Hi-Vis long sleeves and long pants Safety boots Hat Goggles Gloves - manual handling, disposable, white cotton, chain mesh, cut resistant, freezer Safety glasses Freezer jacket		
CONTROLS	Floor scrubber Pallet jack – manual and electric Roller door – manual and automatic Swing doors Dollies Trolleys Hazard/Risk assessment procedures Phone/Radio Vehicle Forklift		
HEIGHTS	Occasional use of ladder (when defrosting freezer)		
HYGIENE EXPOSURES	Cross contamination – food/rubbish handling		

JOB ROLE PROFILE CONTINUED

STORES PERSON

WORK ATTRIBUTES: POSTURES / PHYSICAL DEMANDS / REACHING

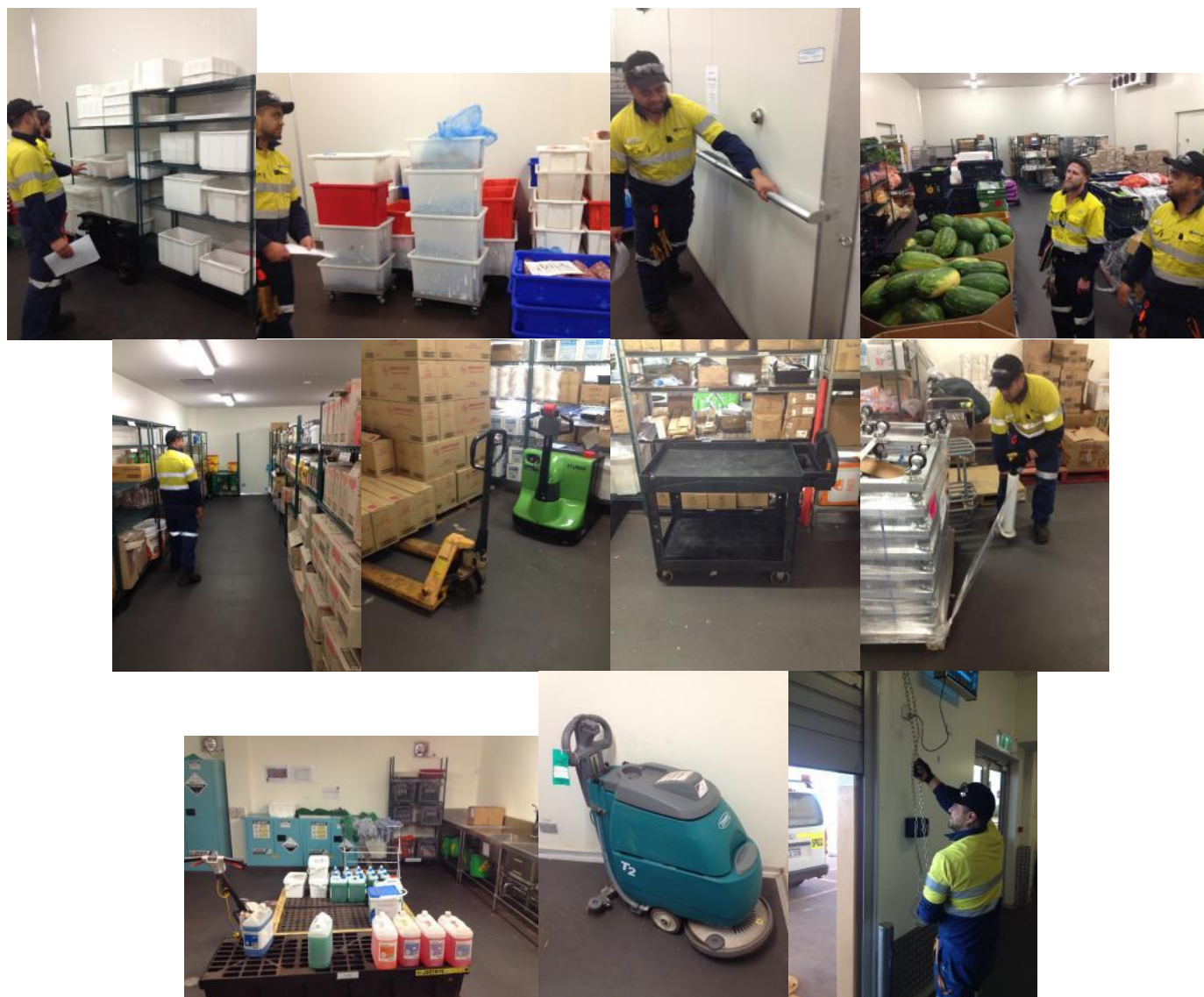
	WEIGHT	NEVER 0%	OCCASIONAL 1% – 33%	FREQUENT 34% – 66%	CONSTANT 67% – 100%
SIT		☒			
WALK including uneven terrain and gradients					☒
STAND					☒
LOW WORK SITTING (NECK STOOP)		☒			
LOW WORK STANDING (BACK STOOP)			☒		
STAIR CLIMB		☒			
LADDER CLIMB			☒		
BALANCE			☒		
KNEEL			☒		
CRAWL		☒			
CROUCH/LOW SQUAT		☒			
SQUAT				☒	
REACH FORWARD					☒
REACH OVERHEAD					☒
SUSTAINED WORK – BELOW KNEE			☒		
SUSTAINED WORK – ABOVE SHOULDERS			☒		
UPPER LIMB REPETITIVE ACTION					☒
UNILATERAL CARRY	1-8kg		☒		
BILATERAL CARRY	2-25kg			☒	
PULL / PUSH					☒
LIFT TO WAIST HEIGHT	0.5kg		☒		
LIFT TO WAIST HEIGHT	1-5kg			☒	
LIFT TO WAIST HEIGHT	15-25kg				☒
LIFT TO SHOULDER / EYE LEVEL	1-5kg			☒	
LIFT TO SHOULDER / EYE LEVEL	15-25kg				☒
LIFT - Other Waist to Chest Level	1-25kg			☒	
HAND DEXTERITY			☒		
GRIPPING					☒
OVERHEAD LYING DOWN		☒			
TRUNK ROTATION STANDING					☒
TRUNK ROTATION SITTING		☒			
OTHER – Stacking pallets floor to eye level	30-40kg (team lift = 17-23 kg each)		☒		

JOB ROLE PROFILE CONTINUED

STORES PERSON

BODY DEMANDS

	NEVER 0%	OCCASIONAL 1% – 33%	FREQUENT 34% – 66%	CONSTANT 67% – 100%
NECK		☒		
BACK				☒
SHOULDERS				☒
ELBOWS				☒
HAND / WRIST / FINGERS				☒
LEGS				☒
CARDIOVASCULAR		☒		



JOB ROLE PROFILE

TOWN SERVICES CLEANER

WORK / REST PATTERNS	10-12 hours per day		
USUAL PHYSICAL TASKS	ADMIN. TASKS / PAPERWORK BED MAKING BED STRIPPING CLEAN A/C FILTERS CLEAN APPLIANCES CLEAN EXHAUST FANS CLEAN WALLS CLEAN PATHWAYS CLEAN SHOWERS CLEAN VEHICLE CLEAN WASHER / DRYER / DOMESTIC DISHWASHER	COMPUTER DUTIES DISPENSE CHEMICALS DRIVE VEHICLE INCL. MINIBUS/VAN, LIGHT VEHICLE DUSTING EMPTY DESK DUSTBINS FOLD & SORT LINEN LOAD / UNLOAD / COLLECT LINEN LOAD / UNLOAD PALLET/STOCK MOP MOVE / EMPTY GREEN BINS	MOVE / STACK FURNITURE OPEN / CLOSE VEHICLE COMPARTMENT PICK UP RUBBISH RE-FUEL VEHICLE SORT LINEN STOCK SHELVES STRIP AND SEAL FLOORS SWEEP USE OFFICE EQUIPMENT USE PHONE/RADIO VACUUM
PHYSICAL DEMAND LEVEL	MEDIUM – HEAVY . See WORK ATTRIBUTES and BODY DEMANDS table below.		
PHYSICAL RISK FACTORS	Fatigue Repetition Forceful exertion Awkward postures		
TOOLS	Mop Spray bottle Squeegee Cleaning cloths Broom High pressure hose Bucket Doodle bug Brushes Linen bag Scourer Paper towel Dustpan Portable hose (tap attachment) Jug Phone/Radio Feather duster Bin liner Toilet brush Sponges Fringe mop/scissor sweeper Vacuum Carpet cleaner		
GRIP TYPE	Flat fist Fingertip grip	Cylindrical Flat hand (wiping)	Power grip Three point grip
HANDLING REQUIREMENTS	Varied size, action and frequency. CONSTANTLY: cleaning changing sheets transferring amenities sweeping mopping lifting changing bin liners vacuuming		
FORCE EXERTION	15kg mattress 20kg linen bag 10kg push/pull 20kg team lift + carry		
ENVIRONMENTAL FACTORS	Large work area Uneven ground Variable weather- dust, heat, extreme heat, humidity, rain, sun, wind, mud Remote/isolated location Limited medical facilities Variable road conditions Small workspaces Chemicals Wildlife Rubbish Personal quarters – uncontrolled slip / trip hazards Pests		
PPE	Hi-Vis long sleeves and long pants Safety glasses Hat Safety boots Gloves – manual handling, rubber, disposable, white cotton Fly net Goggles Dust mask Hearing protection Respirator Apron Kneepads		
CONTROLS	Stripper & sealer Vacuum Vehicle Domestic dishwasher Phone/Radio Fringe mop/scissor sweeper Chemicals Carpet cleaner Hazard/Risk assessment procedures		
HEIGHTS	N/A (occasional staircases only)		
HYGIENE EXPOSURES	Body fluids Rubbish Dirty/contaminated rooms/toilets/showers Cross contamination – clean/soiled linen		



JOB ROLE PROFILE CONTINUED

TOWN SERVICES CLEANER

WORK ATTRIBUTES: POSTURES / PHYSICAL DEMANDS / REACHING

	WEIGHT	NEVER 0%	OCCASIONAL 1% – 33%	FREQUENT 34% – 66%	CONSTANT 67% – 100%
SIT			☒		
WALK including uneven terrain and gradients					☒
STAND					☒
LOW WORK SITTING (NECK STOOP)		☒			
LOW WORK STANDING (BACK STOOP)				☒	
STAIR CLIMB			☒		
LADDER CLIMB			☒ Safety Step		
BALANCE				☒	
KNEEL			☒		
CRAWL		☒			
CROUCH/LOW SQUAT				☒	
SQUAT				☒	
REACH FORWARD				☒	
REACH OVERHEAD			☒		
SUSTAINED WORK – BELOW KNEE				☒	
SUSTAINED WORK – ABOVE SHOULDERS			☒		
UPPER LIMB REPETITIVE ACTION					☒
UNILATERAL CARRY	up to 20kg team lift = 12.5kg each			☒	
BILATERAL CARRY	up to 15kg		☒ 15kg		☒ 5kg
PULL / PUSH				☒	
LIFT TO WAIST HEIGHT	up to 20kg from floor		☒		
LIFT TO WAIST HEIGHT	10-15kg			☒	
LIFT TO SHOULDER / EYE LEVEL	5-10kg from waist			☒	
LIFT - Other					
HAND DEXTERITY					☒
GRIPPING					☒
OVERHEAD LYING DOWN		☒			
TRUNK ROTATION STANDING				☒	
TRUNK ROTATION SITTING			☒		
OTHER					

JOB ROLE PROFILE CONTINUED

TOWN SERVICES CLEANER

BODY DEMANDS

	NEVER 0%	OCCASIONAL 1% – 33%	FREQUENT 34% – 66%	CONSTANT 67% – 100%
NECK			☒	
BACK				☒
SHOULDERS				☒
ELBOWS			☒	
HAND / WRIST / FINGERS				☒
LEGS				☒
CARDIOVASCULAR			☒	



JOB ROLE PROFILE

TRANSPORT UTILITY

WORK / REST PATTERNS	10-12 hours per day		
USUAL PHYSICAL TASKS	ADMIN. TASKS / PAPERWORK CLEAN APPLIANCES CLEAN BUS CLEAN SURFACES CLEAN VEHICLE CLEAN WASHER / DRYER COMPUTER DUTIES DISPENSE CHEMICALS	DRIVE BUS DRIVE RUBBISH TRUCK DRIVE VEHICLE INCL. MINIBUS/VAN, 4X4 TRUCK, LIGHT VEHICLE DUSTING LOAD / UNLOAD PALLET/STOCK LUGGAGE HANDLING MOP MOVE TROLLEY INCL. MANUAL PALLET JACK	OPEN / CLOSE LUGGAGE COMPARTMENT PICK UP RUBBISH RECYCLING MANAGEMENT RE-FUEL VEHICLE STOCK SHELVES / COOL ROOMS / FREEZERS SWEEP USE FORKLIFT WIND HOSE REEL
PHYSICAL DEMAND LEVEL	MEDIUM – HEAVY . See WORK ATTRIBUTES and BODY DEMANDS table below.		
PHYSICAL RISK FACTORS	Fatigue Repetition Forceful exertion Awkward postures		
TOOLS	Mop Spray bottle Squeegee Cleaning cloths Broom High pressure hose		
GRIP TYPE	Flat fist Trigger grip	Cylindrical Fingertip grip	Power grip Three point grip
HANDLING REQUIREMENTS	Varied size and frequency. CONSTANTLY: Steering wheel Cleaning materials		
FORCE EXERTION	Max lift 15 – 20kg		
ENVIRONMENTAL FACTORS	Large camp area / large work area Uneven ground Variable weather- dust, heat, extreme heat, humidity, rain, sun, wind, mud Remote/isolated location Limited medical facilities Visibility – day + night Unsealed roads Variable road conditions Small workspaces Trip hazards Chemicals Wildlife Rubbish		
PPE	Gloves – manual handling, disposable Hat Safety boots Hi-Vis long sleeves and long pants Glasses Hardhat		
CONTROLS	Vehicle – 4X4 Truck, Bus, Light Vehicle, Buggy, Rubbish Truck (with tilt tray or compactor), Forklift, Minibus/van Dash controls Hazard/Risk assessment procedures		
HEIGHTS	N/A		
HYGIENE EXPOSURES	Soiled clothing (in laundries) Rubbish		

JOB ROLE PROFILE CONTINUED

TRANSPORT UTILITY

WORK ATTRIBUTES: POSTURES / PHYSICAL DEMANDS / REACHING

	WEIGHT	NEVER 0%	OCCASIONAL 1% – 33%	FREQUENT 34% – 66%	CONSTANT 67% – 100%
SIT				☒	
WALK including uneven terrain and gradients				☒	
STAND				☒	
LOW WORK SITTING (NECK STOOP)		☒			
LOW WORK STANDING (BACK STOOP)				☒	
STAIR CLIMB				☒	
LADDER CLIMB			☒ Safety Step		
BALANCE		☒			
KNEEL			☒		
CRAWL		☒			
CROUCH/LOW SQUAT			☒		
SQUAT				☒	
REACH FORWARD					☒
REACH OVERHEAD		☒			
SUSTAINED WORK – BELOW KNEE		☒			
SUSTAINED WORK – ABOVE SHOULDERS			☒		
UPPER LIMB REPETITIVE ACTION				☒	
UNILATERAL CARRY	5kg - 20kg		☒		
BILATERAL CARRY	15kg		☒		
PULL / PUSH					☒
LIFT TO WAIST HEIGHT	15kg		☒		
LIFT TO SHOULDER / EYE LEVEL					
LIFT - Other Below knee	25kg		☒		
HAND DEXTERITY				☒	
GRIPPING					☒
OVERHEAD LYING DOWN		☒			
TRUNK ROTATION STANDING		☒			
NECK ROTATION SITTING					☒
OTHER – Reach sideways				☒	
Climb (in/out vehicles)			☒		

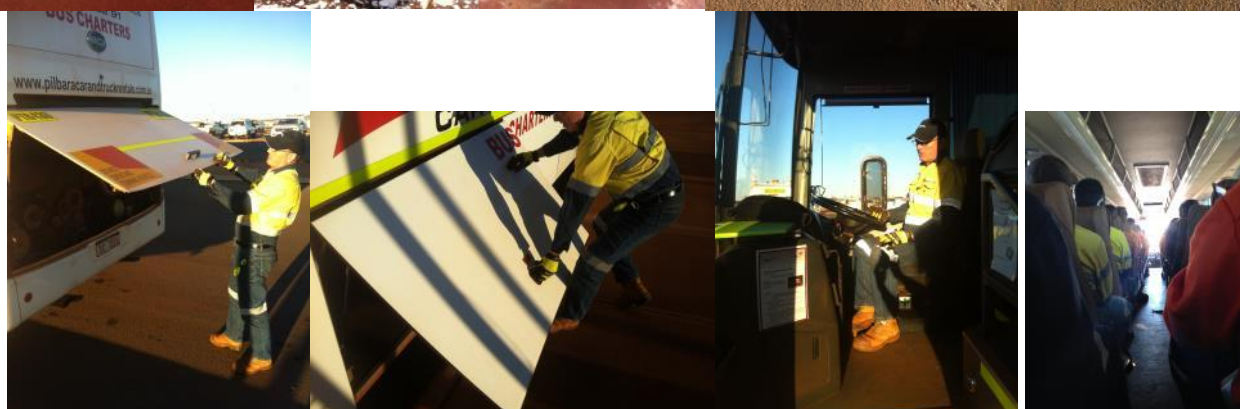


JOB ROLE PROFILE CONTINUED

TRANSPORT UTILITY

BODY DEMANDS

	NEVER 0%	OCCASIONAL 1% – 33%	FREQUENT 34% – 66%	CONSTANT 67% – 100%
NECK			☒	
BACK			☒	
SHOULDERS				☒
ELBOWS				☒
HAND / WRIST / FINGERS				☒
LEGS			☒	
CARDIOVASCULAR		☒		



JOB TASK INDEX

ADMIN. TASKS / PAPERWORK
ANIMAL HANDLING
AGRICULTURAL SPRAYING

BED MAKING
BED STRIPPING

CASH HANDLING
CLEAN AIR CONDITIONING FILTERS
CLEAN APPLIANCES
CLEAN BAIN-MARIES
CLEAN BARBECUES
CLEAN BUS
CLEAN COLD WELLS
CLEAN DRAINS
CLEAN FREEZERS
CLEAN FRIDGES
CLEAN FRYERS
CLEAN GYM EQUIPMENT
CLEAN OVENS
CLEAN PATHWAYS
CLEAN PIGEON HOLES
CLEAN POOL
CLEAN EXHAUST FANS / RANGEHOODS
CLEAN SHOWERS
CLEAN SURFACES
CLEAN TOILETS
CLEAN VEHICLE
CLEAN WALLS
CLEAN WASHER / DRYER / DOMESTIC
DISHWASHER
COMPUTER DUTIES
COOK - HOT PLATE/STOVE/FRYER

DECORATE DINING ROOM / SET UP
FUNCTIONS
DIGGING
DISPENSE CHEMICALS
DISPOSE EXCESS FOOD
DRAGGING BRANCHES
DRIVE BUGGY
DRIVE BUS
DRIVE RUBBISH TRUCK / TRACTOR
DRIVE VEHICLE
DUSTING

EMPTY DESK DUSTBINS

FILL GAS BOTTLES
FOLD & SORT LINEN

HAND WORK – PASTRY & DOUGH

KEY MANAGEMENT / ROOM CHECK IN
KNIFE WORK

LOAD & OPERATE COLD MEAT SLICER
LOAD / UNLOAD / COLLECT LINEN
LOAD / UNLOAD COLD WELLS
LOAD / UNLOAD BAIN MARIES
LOAD / UNLOAD PALLETS / STOCK
LOAD / UNLOAD PIE FREEZERS
LOAD / USE / UNLOAD INDUSTRIAL
DISHWASHER
LOAD FOOD & BEVERAGE DISPENSERS
LOAD FROZEN MEATS INTO 20L/40L
CONTAINER
LOAD / UNLOAD INDUSTRIAL MIXER
LOAD PLATES
LOAD POTATO RUMBLER
LOAD TRAY TROLLEY
LOWERING BRANCHES
LUGGAGE HANDLING

MAIL / FREIGHT CHECK-IN
MAINTENANCE – CHANGE DOOR LOCKS
MAINTENANCE – RETICULATION
MAINTENANCE – SHOWER HEADS
MAINTENANCE – SWIMMING POOL
MAINTENANCE – TAPS
MAINTENANCE – TOILETS
MAINTENANCE – USE VEHICLE JACK
MAINTENANCE – WHEELS ON
TROLLEY/BIN
MOP
MOVE ELECTRIC TROLLEY
MOVE / EMPTY GREEN BINS
MOVE TUBS OF FOOD
MOVE POTS/PANS
MOVE / STACK FURNITURE
MOVE TROLLEY
MULCHING

OPEN/CLOSE LUGGAGE COMPARTMENT

PAINTING
PEEL VEGETABLES
PERFORM ROOM CHECKS
PICK UP RUBBISH
PREPARE COFFEE
PREPARE FOOD
PRUNING

RAKING
RECYCLING MANAGEMENT
RE-FUEL VEHICLE
REPAIR FOOTPATH
RINSE CROCKERY & CUTLERY
RUN GROUP FITNESS CLASS / STRETCHES

SCRUB POTS & PANS
STOCK ROTATION
STOCK SHELVES / COOL ROOMS /
FREEZERS
STOCK ICE WELLS
STRIP AND SEAL FLOORS
STUMP GRINDING
SWEEP

USE BOBCAT OR FORKLIFT
USE CAN OPENER
USE CHAINSAW
USE CHIPPER/MULCHER
USE PHONE/RADIO
USE FOOD SLICER
USE GLASS CRUSHER
USE OFFICE EQUIPMENT
USE POLESAW
USE RIDE ON MOWER
USE FLOOR SCRUBBER
USE WHIPPER SNIPPER / BRUSH CUTTER

VACUUM

WEEDING
WIND HOSE REEL
WORK ON EWP



JOB TASK ANALYSIS ADMINISTRATION TASKS / PAPERWORK

PHYSICAL DEMAND	Light
MOVEMENTS	• Sitting in office chair • Cervical spine rotation and flexion. • Slight shoulder flexion bilateral or unilateral – sustained. • Slight shoulder abduction/ adduction. • Wrist radial/ulnar deviation. • Finger manipulation. • Sustained hip flexion. • Sustained knee flexion.
SUSTAINED RISK FACTORS	• Sustained hip flexion. • Sustained knee flexion. • Sustained wrist extension.
REPETITIVE RISK FACTORS	• Constant slight shoulder flexion bilateral or unilateral – sustained. • Constant slight shoulder abduction/ adduction. • Frequent wrist radial/ulnar deviation. • Constant finger manipulation – Finger flexion and extension. • Frequent cervical spine rotation and flexion.
RISK INJURY AREAS	• Neck strain, sprain and muscle cramp. • Back - if poor sitting posture and pressure on structures. • Lower limbs - if chair pressure on backs of legs is high – altering circulation.
MODIFICATIONS	• Ensure appropriate ergonomic workstation and chair set up including adequate lumbar support. • Allow regular breaks from sustained computer duties – eye exercises and musculoskeletal stretches.
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury creating varied conditions for workers – e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration.
OTHER FACTORS	Length of sustained posture and overall level of force and movement repetition will vary based on the furniture type.

JOB TASK ANALYSIS ANIMAL HANDLING

PHYSICAL DEMAND

Medium

MOVEMENTS

- Bilateral lower limb coordination to stand, walk and turn.
- Hip flexion, extension, knee flexion and extension, ankle dorsiflexion and plantarflexion.
- Hip abduction and adduction.
- Cervical flexion, extension, and rotation.
- Shoulder flexion bilateral or unilateral. Shoulder abduction and adduction.
- Unilateral/bilateral wrist flexion, extension, radial and ulnar deviation.
- Elbow flexion and extension.
- Forearm pronation and supination.
- Flexion and extension of thumbs and fingers as required to grip animal handling kit with moderate intensity.
- Use of leg and gluteal muscles to maintain squat, crouch
- Forward bending or stooping

SUSTAINED RISK FACTORS

- Cervical flexion, rotation to take note of walk path and search for animal.
- Grip of handling kit.
- Working at a mechanical disadvantage by carrying load away from body to ensure a safe distance from the animal.
- Standing

REPETITIVE RISK FACTORS

- Frequent hip and knee flexion and extension, usually walking but also in a deep squat position.
- Hip abduction and adduction.
- Elbow flexion and extension with forearm pronation and supination.
- Wrist flexion, extension, radial and ulna deviation.
- Shoulder flexion and extension.
- Cervical flexion and rotation.

RISK INJURY AREAS

- Back, shoulder, wrist and elbow strains if maintaining poor posture when standing and reaching away from body.
- Lower limb strain or joint injury particularly whilst squatting and moving laterally.
- Spine when failing to use legs (i.e. bend at hips, knees and ankles) to lower body and reach animal on the ground. This increases the risk of strain and sprain if task is performed with flexed or overextended spine rather than maintaining neutral spine.
- Neck due to sustained flexion, elongation of spinal muscles leads to poor blood flow and increased risk of injury. Neck strain, sprain and muscle cramp.
- Shoulder injury or impingement due to performing tasks requiring use of force whilst at a mechanical disadvantage with load carried away from body.
- Shoulder injury if uncontrolled twisting or repeated cross centreline reaching. Both of these things lead to increased risk of impingement.
- Hands, wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm take the entire load. – leading to fatigue and strain or sprain.

MODIFICATIONS

- Scan work area prior to commencing task to take note of uneven surfaces and hazards.
- Implement normal manual handling techniques by using hip and knee flexion to reach objects on the ground rather than flexion of the spine and excessive reaching with upper limbs.
- Ensure movement is possible in forwards, backwards and laterally at all times as animals are likely to move and working position will need to be adjusted.
- Use of safety step in event that animal is higher than shoulder height.
- Maintain neutral spine when possible.
- Stand with joints in slight flexion
- Activate core musculature to stabilise at spine and reduce risk of twisting sprain/strain.
- If transporting heavy animal, use two handed carry and move feet to face where placing it so that no injurious twisting of knees and spinal structures occurs. Seek assistance

ENVIRONMENTAL FACTORS

Access – if there is less space, then movement will be more awkward and joints will be placed at greater risk of strain. Effects of temperature can increase likelihood of injury – heat leading to dehydration and reduced health of body tissue, cold can lead to poor circulation to body tissue and reduced flexibility.

OTHER FACTORS

Animals are likely to move increasing the likelihood of needing to make quick lateral movements standing as well as in a squat position. Animals can vary greatly in weight. Heavier animals may require the use of a 2nd qualified handler with appropriate equipment.

JOB TASK ANALYSIS AGRICULTURAL SPRAYING

PHYSICAL DEMAND	Medium
MOVEMENTS	• Bilateral lower limb coordination, including Hip flexion and extension, Knee flexion and extension, Ankle dorsiflexion and plantar flexion. • Shoulder flexion, abduction and extension. At times reaching above shoulder and behind body. • Elbow extension and flexion, pronation, supination • Finger manipulation, flexion and extension (for gripping) • Trunk flexion, rotation • Cervical rotation
SUSTAINED RISK FACTORS	• Elbow flexion or extension. • Shoulder flexion or extension and abduction • Gripping of the hose, equipment • Trunk rotation
REPETITIVE RISK FACTORS	• Frequent shoulder flexion, extension and abduction. • Frequent elbow extension and flexion. • Frequent wrist deviation. • Cervical rotation
RISK INJURY AREAS	• Spine (cervical and lumbar), knee and hip, shoulder, elbow, wrist strain or sprain. • Potential risk of injury (lower limb or spinal) is poor or awkward posture maintained, or associated with twisting movements. • Sprain or strain to shoulders, elbows or wrists if the spray arms are awkward to open. • Risk of lower limb injury across uneven terrain. • Chemical exposure.
MODIFICATIONS	• Enter and exit buggy/vehicle safely - ensure stable footing and grip holds during alighting on and off the back of the buggy/vehicle (including 3 points of contact). • Check seated position is ergonomic and comfortable before driving. • Reduce reaching distance and awkward abduction/extension through unwinding hose reel. Keep tension on hose reel even. • Perform all steps of the task within easy arms reach - position body close to the task • Use a double-handed approach to lifting onto back of buggy/vehicle to reduce strain. Seek assistance • Ensure suitable gripping of containers/equipment to minimise risk. Keep control of the pour to reduce awkward forces through the upper arms while under load. • Ensure positioning when opening spray arm that supports and guards the shoulder from irregular or awkward movements. • Keep an eye on terrain to reduce the risk of slip, trip or accident. • Drive buggy/vehicle to conditions of terrain. • Stop and start buggy as and when needed to review spray operation controls and effectiveness.
ENVIRONMENTAL FACTORS	The nature of terrain being sprayed could influence the risk of injury for the operator. Weather/temperature - excessive heat or cold may also influence risk of soft tissue injury as muscles may be more fatigued or not warmed up for the task.
OTHER FACTORS	Physical demand variable - may include use of manual or mechanised systems for chemical application, such as spray units mounted on vehicles, or manually operated fertiliser dispenser mounted on buggy. Personal attributes of the individual may influence safety throughout lifting or carrying tasks - fit, strong, flexible staff will handle forces/loads more easily. Levels of hydration may also influence risk of injury with respect to fatigue and concentration. Refer also to Drive Buggy, Drive Vehicle task analysis.

JOB TASK ANALYSIS BED MAKING

PHYSICAL DEMAND	Heavy
MOVEMENTS	- Shoulder flexion, extension, adduction and abduction. - Elbow flexion and extension. - Forearm pronation and supination - Wrist extension and flexion - Finger flexion and extension - grasping - Bilateral lower limb coordination - Walking / standing - Squatting, crouching, lunging and kneeling with and without load - Stooping and reaching - Hip and knee flexion and extension - Ankle dorsiflexion and plantar flexion
SUSTAINED RISK FACTORS	- Cervical flexion - Elbow flexion and forearm supination - Knee flexion - Finger flexion with grasping - Abdominal and spinal muscle activation for stability
REPETITIVE RISK FACTORS	- Constant shoulder flexion, extension, adduction and abduction. - Constant elbow flexion and extension - Constant forearm pronation and supination - Constant wrist extension and flexion - Frequent walking / standing - Frequent squatting & lunging – hip flexion and extension, plus knee flexion and extension - Frequent stooping and reaching - Frequent ankle dorsiflexion and plantar flexion.
RISK INJURY AREAS	- Shoulders due to repeated tasks requiring use of force to manipulate linen and mattress with arms. - Back and shoulder strains if using incorrect procedure such as standing still and twisting at back and reaching with arms to tuck sheets in under mattress. - Back, shoulders, wrists, elbows and shoulder strains if using incorrect procedure such as failing to activate core muscles, or using upper body strength rather than body weight and legs - Spinal joints and musculature if feet facing wrong way when moving bed or manipulating sheets, twisting. - Knees if correct movement of feet when turning doesn't occur. Meniscal structures are susceptible to injury in situations of twisting. - Back muscles and spine structures if perform task with flexed spine rather than maintaining neutral spine
MODIFICATIONS	- Pre-start warm up - Regular re-set stretches performed to reduce muscle tension and pressure on joints - If the bed has brakes release them and pull the bed out from wall to the centre of room with care – do not over extend. This will allow employee to avoid twisting and reaching. - Remove the dirty bed linen and replace with clean linen keeping a neutral spine position and using 'thumbs up' - working grip position of hands. - Leave and notify management if rooms have restricted or unsafe access, due to cluttered floors or the wheels of the bed removed that pose an additional hazard - Move feet and use legs to position body so that torso/trunk is facing work area and twisting is avoided. - Use legs and correct manual handling techniques such that neutral spine is maintained. - Use a light but controlling grip as a heavy grip may lead to fatigue in arm musculature. Avoid using pinch grip where able.
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury creating varied conditions for cleaners to work in – e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration. State and furniture set up of the room will alter how easily cleaner can access bed and move it within the room.
OTHER FACTORS	Length of sustained posture and overall level of force and movement repetition will vary based on the furniture type, status and room size. Daily repetitions of an action will be determined both by number of rooms cleaned and individual method/ technique. Individual characteristics such as height, strength, fitness, fatigue and mobility will affect force and postures used and likelihood of injury. Behavioural factors, such as rushing, can alter likelihood of injury.

JOB TASK ANALYSIS BED STRIPPING

PHYSICAL DEMAND	Heavy
MOVEMENTS	- Shoulder flexion, extension, adduction and abduction. - Elbow flexion and extension. - Forearm pronation and supination - Wrist extension and flexion - Finger flexion and extension - grasping - Bilateral lower limb coordination - Walking / standing - Squatting, crouching, lunging and kneeling with and without load - Stooping and reaching - Hip and knee flexion and extension - Ankle dorsiflexion and plantar flexion
SUSTAINED RISK FACTORS	- Cervical flexion - Elbow flexion and forearm supination - Knee flexion - Finger flexion with grasping - Abdominal and spinal muscle activation for stability
REPETITIVE RISK FACTORS	- Constant shoulder flexion, extension, adduction and abduction. - Constant elbow flexion and extension - Constant forearm pronation and supination - Constant wrist extension and flexion - Frequent walking / standing - Frequent squatting & lunging – hip flexion and extension, plus knee flexion and extension - Frequent stooping and reaching - Frequent ankle dorsiflexion and plantar flexion.
RISK INJURY AREAS	- Shoulders due to repeated tasks requiring use of force to manipulate linen and mattress with arms. - Back and shoulder strains if using incorrect procedure such as standing still and twisting at back and reaching with arms to tuck sheets in under mattress. - Back, shoulders, wrists, elbows and shoulder strains if using incorrect procedure such as failing to activate core muscles, or using upper body strength rather than body weight and legs - Spinal joints and musculature if feet facing wrong way when moving bed or manipulating sheets, twisting. - Knees if correct movement of feet when turning doesn't occur. Meniscal structures are susceptible to injury in situations of twisting. - Back muscles and spine structures if perform task with flexed spine rather than maintaining neutral spine
MODIFICATIONS	- Pre-start warm up - Regular re-set stretches performed to reduce muscle tension and pressure on joints - If the bed has brakes release them and pull the bed out from wall to the centre of room with care – do not over extend. This will allow employee to avoid twisting and reaching. - Remove the dirty bed linen and replace with clean linen keeping a neutral spine position and using 'thumbs up' - working grip position of hands. - Leave and notify management if rooms have restricted or unsafe access, due to cluttered floors or the wheels of the bed removed that pose an additional hazard - Move feet and use legs to position body so that torso/trunk is facing work area and twisting is avoided. - Use legs and correct manual handling techniques such that neutral spine is maintained. - Use a light but controlling grip as a heavy grip may lead to fatigue in arm musculature. Avoid using pinch grip where able.
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury creating varied conditions for cleaners to work in – e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration. State and furniture set up of the room will alter how easily cleaner can access bed and move it within the room.
OTHER FACTORS	Length of sustained posture and overall level of force and movement repetition will vary based on the furniture type, status and room size. Daily repetitions of an action will be determined both by number of rooms cleaned and individual method/ technique. Individual characteristics such as height, strength, fitness, fatigue and mobility will affect force and postures used and likelihood of injury. Behavioural factors, such as rushing, can alter likelihood of injury.

JOB TASK ANALYSIS CASH HANDLING

PHYSICAL DEMAND	Light
MOVEMENTS	• Prolonged sitting in office chair (when sorting before or after service hours) • Cervical spine rotation and flexion. • Unilateral shoulder flexion, extension, abduction, adduction. This is generally also combined with some degree of rotation. • Wrist radial/ulnar deviation. • Elbow flexion and extension concentric and eccentric control required. • Forearm pronation and supination. • Finger manipulation. • Flexion and extension of thumbs and fingers as required to grasp items with light to moderate intensity. • Moderate abdominal and spinal muscle contraction for stability • Bilateral lower limb coordination to stand, walk and turn. • Hip flexion and extension • Knee flexion and extension • Ankle Dorsiflexion and plantar flexion
SUSTAINED RISK FACTORS	When seated for sorting / counting: • Sustained hip flexion • Sustained knee flexion • Sustained eye focus on close item. • Sustained wrist extension • Sustained thigh compression against seat Standing (during service)
REPETITIVE RISK FACTORS	• Fine motor use of hands – finger flexion and extension – keying, counting cash, receipts, use of EFTPOS and cash register equipment. • Occasional elbow flexion and extension • Frequent shoulder flexion and extension
RISK INJURY AREAS	• Back, shoulders, wrists, elbows and shoulder cumulative injuries and strains if maintain poor posture when performing standing and reaching activities • Back, Hip and Knee joints when standing for long periods of time.
MODIFICATIONS	• Good cash register and desk Ergonomic set-up. • Regular re-set stretches • Minimal bench width in front of serving counter – this allows closer movement so reduces reaching and torque on spine and shoulders • Ambidextrous use of upper limbs maintaining neutral posture of joints.
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury creating varied conditions for bar staff – e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration. Floor surface is another factor that can alter fatigue of muscles, pressure on joints and other structures, therefore susceptibility to work related musculoskeletal injury.
OTHER FACTORS	Length of sustained posture and overall level of force and movement repetition will vary based on shift requirements – busier times of day or busier nights require more cash handling. When frequently handling cold drinks from the fridge and ice wells, finger dexterity may decrease and temperature of hands may lead to increased joint stiffness.

JOB TASK ANALYSIS CLEAN AIR CONDITIONING FILTERS

PHYSICAL DEMAND	Medium
MOVEMENTS	• Cervical flexion and rotation, sustained extension • Bilateral and unilateral shoulder flexion (sustained above head), extension, abduction, and adduction. Also generally combined with some degree of rotation. • Elbow extension (sustained above head) and flexion. • Forearm pronation and supination. • Wrist extension and flexion, radial and ulnar deviation. • Finger flexion and extension, manipulation. • Moderate abdominal and spinal muscle contraction for stability. • Hip flexion and extension, knee flexion and extension. • Ankle dorsiflexion and plantar flexion.
SUSTAINED RISK FACTORS	• Cervical extension. • Shoulder in slight abduction and flexion (to work in front of body or overhead). • Standing - likely on safety step
REPETITIVE RISK FACTORS	• Frequent bilateral shoulder flexion, abduction and adduction. Also generally combined with internal and external rotation. • Frequent wrist extension and flexion, plus radial and ulnar deviation. • Constant elbow flexion and extension. • Frequent flexion of fingers of hand - used in moderate intensity grip. • Constant abdominal and spinal muscle contraction for stability. • Frequent hip flexion and extension, knee flexion and extension, ankle dorsiflexion and plantar flexion.
RISK INJURY AREAS	• Back muscles and spinal structures, shoulders, wrists, elbows and shoulder strains - if using incorrect manual handling during task. • Shoulders, neck from sustained work overhead. • Knees and back - if feet facing wrong way, i.e. twisting during task.
MODIFICATIONS	• Use ambidextrous cleaning method maintaining 'neutral wrist' working position of hand - dust or wipe right side with right hand and left side with left hand, to reduce internal rotation of shoulder and risk of impingement. • Bring the task close to the body. • Use all leg joints to lower body to correct height rather than flexing at spine. Dust/wipe unit with tool that has a telescopic handle to reduce reaching. • Use safety step where appropriate so not to work with hands above shoulder height. Do not stand on beds, cabinets, or other furniture items - these may move unexpectedly. • Move feet to position self not to twist during cleaning.
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury - e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration. Dust exposure.
OTHER FACTORS	Length of sustained posture and overall level of force and movement repetition will vary based on the type, number and condition of filters. Daily repetitions of an action will be determined both by work schedule (number and frequency of A/C units cleaned) and efficiency (method of cleaning, and state of A/C unit).

JOB TASK ANALYSIS

CLEAN APPLIANCES EXAMPLES BAR FRIDGE, COFFEE MACHINE, KITCHEN APPLIANCES, OFFICE EQUIPMENT, ICE MACHINE

PHYSICAL DEMAND	Light - Medium
MOVEMENTS	- Bilateral lower limb coordination to stand, walk, crouch and turn. - Hip flexion, extension, knee flexion and extension, ankle dorsiflexion and plantar flexion. - Cervical flexion, and rotation. - Shoulder flexion bilateral or unilateral. Shoulder abduction/ adduction combined with varied degree of rotation of shoulders. - Wrist in neutral position where possible, with either radial or ulnar deviation. - Elbow flexion and extension, forearm pronation and supination. - Flexion and extension of thumbs and fingers as required to grasp item. - Moderate abdominal and spinal muscle contraction for stability. Use of leg muscles and gluteals to stand, lift, push or move equipment. - Sustained standing – likely with bending or stooping depending on height of equipment.
SUSTAINED RISK FACTORS	- Cervical flexion to take note of walk path and area on equipment to be cleaned. - Grip of cleaning item. - Standing - Cervical flexion and rotation.
REPETITIVE RISK FACTORS	- Frequent shoulder flexion, abduction, adduction, and rotation - Frequent elbow flexion and extension, pronation and supination. - Frequent wrist flexion, extension, radial and ulnar deviation. - Occasional hip and knee flexion. - Occasional ankle dorsiflexion and plantar flexion - Frequent cervical flexion and rotation.
RISK INJURY AREAS	- Back, shoulders, wrists, elbows and shoulder strains - if maintain poor posture when performing standing and reaching activities. - Spine - if fail to use legs (i.e. bend at hips, knees and ankles) to lower body and reach lower items. This increases risk of strain and sprain if task is performed with flexed or overextended spine. - Neck due to sustained flexion - elongation of spinal muscles leads to poor blood flow and increased risk of injury. Neck strain, sprain and muscle cramp. - Shoulder cumulative injury due to repeated tasks requiring use of force whilst positioned in various degrees of flexion and abduction, protracted in relation to spine. - Shoulders, elbows and wrists - if poor technique using upper body strength to perform movements rather than body weight and leg strength. - Hands, wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm take the entire load – leading to fatigue and strain or sprain. - Shoulder injury - if uncontrolled twisting or repeated cross-centreline reaching. Both of these lead to increased risk of impingement.
MODIFICATIONS	- Remove unnecessary equipment or obstacles in preparing the environment. Seek assistance. - Use ambidextrous cleaning method maintaining 'thumbs up' working position of hand - clean right side with right hand and left side with left hand. - Clean with upper arm at side of body where possible to reduce risk of impingement with sustained flexion and abduction of the shoulder. - Regular re-set stretches postural exercises. - Use of safety step in event that part of the equipment is higher than shoulder height. - Position yourself close to the task and adopt safe postures. - Maintain neutral spine at all times to ensure the correct curve of the spine can be maintained. - Avoid standing using ligaments and other passive structures for stability. Keep joints in slight flexion. - Activate core musculature to stabilise at spine and reduce risk of twisting sprain/strain. - Lift items using lower limb muscles more than upper and spinal musculature. - If transporting equipment anywhere, use a two handed carry and move feet to face where moving to avoid twisting of knees and spine. Consider use of aids. Seek assistance for two-person lift.
ENVIRONMENTAL FACTORS	Access to equipment – if little space, movement will be more awkward, and joints will be placed at greater risk of strain. Effects of temperature can increase likelihood of injury – heat leading to dehydration and reduced health of body tissue, cold can lead to poor circulation and reduced flexibility.
OTHER FACTORS	Stains or type of dirt and grease will alter force required. Ability to acquire assistance from others to move appliance will alter access availability and reduce risk. Physical capabilities of staff – cardiovascular fitness and strength – will alter how the forces affect them. Temporal factors – if rushing there is greater likelihood of making mistakes and injuries occurring.

JOB TASK ANALYSIS CLEAN BAIN-MARIES

PHYSICAL DEMAND

Medium

MOVEMENTS

- Bilateral lower limb coordination to stand, squat, walk and turn.
- Hip flexion, extension, knee flexion and extension. Ankle dorsiflexion and plantar flexion.
- Cervical flexion, extension, and rotation
- Shoulder flexion bilateral or unilateral. Shoulder abduction/ adduction combined with varied degree of rotation
- Bilateral wrists neutral with occasional unilateral wrist flexion, extension, radial and ulnar deviation.
- Elbow flexion and extension with forearm pronation and supination
- Flexion and extension of thumbs and fingers as required to grasp item.
- Forward bending, stooping, crouching

SUSTAINED RISK FACTORS

- Sustained light gripping – finger and thumb flexion and adduction
- Sustained reaching and awkward postures

REPETITIVE RISK FACTORS

- Frequent shoulder flexion, extension, adduction and abduction.
- Constant elbow flexion and extension.
- Constant forearm pronation and supination.
- Constant wrist extension and flexion
- Frequent walking, squatting and lunging – hip flexion and extension, plus knee flexion and extension.
- Frequent ankle dorsiflexion and plantar flexion

RISK INJURY AREAS

- Back, shoulders, wrists, elbows and shoulder strains if maintain poor posture when performing upper limb activity.
- Spine if fail to use legs (i.e. bend at hips, knees and ankles) to lower body and reach lower items.
- Back muscles and spine structures if perform any part of task with flexed spine rather than maintaining neutral spine
- Knees and backs if feet facing wrong way when performing task, i.e. twisting.
- Neck due to sustained flexion, combined with upper limb muscle activity – risk of strain, sprain and muscle cramp.
- Shoulder cumulative injury due to repeated tasks involving force whilst positioned in flexion and abduction - over-reaching
- Hands, wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm take the entire load – leading to fatigue and strain or sprain.
- Shoulder injury if uncontrolled twisting or repeated cross centreline reaching. Both of these lead to increased risk of impingement.
- Risk of burns.

MODIFICATIONS

- Select and maintain Bain Maries that are plumbed 'in situ' – for ease of filling/draining hot water
- Avoid working with wrist in extension or flexion – maintain neutral as much as possible with a light grip on tool.
- Regular re-set stretches and exercises
- Don't reach across Bain Marie to clean. Only clean the area within easy reach - this allows closer movement so reduces reaching and torque on spine and shoulders
- Ambidextrous use of upper limbs maintaining neutral postures of joints. This means if working on the right side, use right hand and left side with left hand.
- Maintain neutral spine at all times. Use lower limb joints (hip, knee and ankle) to position body so that neutral spine can be maintained.
- Keep body as close to task as possible: if safe to do so, lean hips onto edge of Bain Marie – to reduce demands on postural muscles.
- Stand with joints in slight flexion.
- Poorly-fitting gloves result in greater muscle use to manipulate equipment and muscles fatiguing faster.

ENVIRONMENTAL FACTORS

Weather and temperature may play a role in determining susceptibility to injury – e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration. Length of sustained posture and overall level of force and movement repetition will vary based on the type of Bain Marie being cleaned – plus how easy it is to access (i.e. whether the sneeze guard or side trays can be moved/removed for cleaning).

OTHER FACTORS

Temporal factors will alter how staff move when performing the task. Pressure to move faster can lead to rushing and increasing risk of injury. The state of the Bain Marie will alter how much force is needed to clean it – if food stuff is stickier or it wasn't cleaned well previously then more cleaning will be required. Finally personal factors will come into play – strength, height, flexibility and cardiovascular fitness of staff member will alter how their body must be positioned and how it copes with the workload – better health = less risk.

JOB TASK ANALYSIS CLEAN BARBECUES

PHYSICAL DEMAND	Medium
MOVEMENTS	• Cervical flexion and rotation. • Shoulder flexion, extension, abduction, adduction and rotation, Elbow flexion and extension, forearm pronation and supination, Wrist extension and flexion, radial and ulnar deviation – while exerting force • Finger flexion and extension - gripping of cleaning equipment • Walking / squatting / lunging / stooping / forward bending : Hip flexion and extension, knee flexion and extension, ankle dorsiflexion and plantar flexion
SUSTAINED RISK FACTORS	• Cervical flexion to observe task • Shoulder in slight abduction and flexion (to work in front of body) • Standing
REPETITIVE RISK FACTORS	• Constant shoulder flexion, extension, adduction and abduction • Constant elbow flexion and extension • Constant forearm pronation and supination • Constant wrist extension and flexion • Occasional walking, bending, squatting, crouching & lunging – trunk flexion, hip flexion and extension, plus knee flexion and extension, ankle dorsiflexion and plantar flexion
RISK INJURY AREAS	• Back, shoulders, wrists, elbows and shoulder strains if using incorrect manual handling techniques during task without maintaining neutral joint postures. • Shoulder injury if uncontrolled twisting, excessive force or repeated cross centreline reaching. These contribute to increased risk of impingement • Wrist, elbow strain from using dominant hand only, and /or applying excessive force to grip tools or perform cleaning action and smaller muscles of the hand and forearm take the entire load – leading to fatigue and strain or sprain. • Risk of burns
MODIFICATIONS	• Use ambidextrous cleaning method maintaining neutral joint positions. This means clean right side with right hand and left side with left hand, to reduce internal rotation of shoulder and risk of impingement • Stand close to the task, maintain neutral spine. Use all leg joints to lower body to correct height rather than just flexing at spine. • Stand with joints in slight flexion, step with feet to turn rather than twisting. • Regular posture re-set exercises and stretches.
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury – e.g. cold can lead to increased joint stiffness whereas heat may lead to higher levels of dehydration
OTHER FACTORS	Any spilling of water and/or grease may lead to slippery floors. Number, type and condition of barbecue will influence physical demand for the task. This may lead to greater fatigue of muscles, pressure on joints and other structures, therefore susceptibility to work related musculoskeletal injury - can be minimised by use of heat, chemicals and regular cleaning schedule.

JOB TASK ANALYSIS CLEAN BUS

PHYSICAL DEMAND	Medium
MOVEMENTS	• Bilateral lower limb coordination to stand, step and turn. • Hip and knee flexion and extension. Ankle dorsiflexion and plantar flexion. • Cervical flexion, extension, and rotation. • Shoulder flexion and abduction/adduction, with external rotation. • Elbow flexion and extension. • Wrist extension, radial and ulnar deviation. Forearm pronation • Flexion and extension of thumbs and fingers as required to grip cleaning tool. • Moderate abdominal and spinal muscle contraction
SUSTAINED RISK FACTORS	• Finger and thumb flexion to grip handle • Standing – knees with slight flexion, hips neutral. • Squatting – hip flexion, knee flexion and dorsiflexion of ankle. • Cervical extension • Moderate abdominal and spinal muscle contraction
REPETITIVE RISK FACTORS	• Shoulder flexion, abduction, adduction and rotation • Elbow flexion, extension, and pronation • Wrist extension, radial and ulnar deviation • Hip and knee flexion • Ankle dorsiflexion and plantar flexion
RISK INJURY AREAS	• Spine if fail to use legs (i.e. bend at hips, knees and ankles) to lower body and reach lower items. • Back muscles and spine structures if perform any part of task with flexed spine rather than maintaining neutral spine • Knees and back if feet facing different way to trunk and upper limbs. • Neck due to sustained positioning and use of attaching upper limb muscles - leads to poor blood flow and increased risk of strain, sprain and muscle cramp. • Wrist, elbows and shoulders strains if using incorrect technique such as standing still and only moving arms to move brush • Pressure injury (neuralgic, bruising or blisters) if handle held with palm of hand on tip of brush/broom • Shoulder cumulative injury due to repeated tasks requiring use of force whilst positioned in flexion and abduction • Hands, wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm take all of the load • Shoulder injury if uncontrolled twisting or repeated cross centreline reaching. Both of these lead to increased risk of impingement.
MODIFICATIONS	• Use telescopic pole where possible so that arm movement can stay below shoulder height. • Always holding the handle of the broom/mop with both hands below shoulder height. • Regular re-set stretches and postural exercises to return spine to neutral and lengthen muscles that tighten over time. • Work with upper arms at sides of body, only allowing small flexion movements to reduce reaching and torque on spine and shoulders • Ambidextrous use of upper limbs maintaining 'thumbs up' working position of hand. • Maintain neutral spine at all times. • Keep joints in slight flexion. • Activate core musculature to stabilise at spine and reduce risk of twisting sprain/strain. • Lift items using lower limb muscles more than upper and spinal musculature. • Use a gentle controlling power grip (whole hand) rather than pinch grip (fingers only)
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury creating varied conditions for cleaners to work in – e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration. Length of sustained posture, posture required, and overall level of force and movement repetition will vary based on the vehicle type and size.
OTHER FACTORS	Other factors: Daily repetitions of an action will be determined both by state of the surface prior to cleaning and size of surfaces that must be cleaned. Behavioural factors can alter likelihood of injury – i.e. staff can choose to follow recommendations and alter hand position or body position to reduce risk. Finally physical factors such as height, strength and fitness will alter likelihood of an incident occurring.

JOB TASK ANALYSIS CLEAN COLD WELLS

PHYSICAL DEMAND	Medium
MOVEMENTS	- Bilateral lower limb coordination to stand, squat, walk and turn. - Hip flexion, extension, knee flexion and extension, ankle dorsiflexion and plantar flexion – at times while generating force e.g. to move cold well. - Cervical flexion, extension, and rotation - Shoulder flexion bilateral or unilateral. Shoulder abduction/ adduction combined with varied degree of rotation (at times while generating force e.g. to move cold well) - Bilateral wrists neutral with occasional unilateral wrist flexion, extension, radial and ulnar deviation (at times while generating force e.g. to move cold well) - Elbow flexion and extension with forearm pronation and supination (at times while generating force e.g. to move cold well) - Flexion and extension of thumbs and fingers as required to grasp item. - Forward bending, stooping, crouching
SUSTAINED RISK FACTORS	- Sustained light gripping – finger and thumb flexion and adduction - Sustained reaching and awkward postures
REPETITIVE RISK FACTORS	- Frequent shoulder flexion, extension, adduction and abduction. - Constant elbow flexion and extension. - Constant forearm pronation and supination. - Constant wrist extension and flexion - Frequent walking, squatting and lunging – hip flexion and extension, plus knee flexion and extension. - Frequent ankle dorsiflexion and plantar flexion
RISK INJURY AREAS	- Back, shoulders, wrists, elbows and shoulder strains if maintain poor posture when performing upper limb activity. - Spine if fail to use legs (i.e. bend at hips, knees and ankles) to lower body and reach lower items. - Back muscles and spine structures if perform any part of task with flexed spine rather than maintaining neutral spine - Knees and backs if feet facing wrong way when performing task, i.e. twisting. - Neck due to sustained flexion, combined with upper limb muscle activity – risk of strain, sprain and muscle cramp. - Shoulder cumulative injury due to repeated tasks involving force whilst positioned in flexion and abduction - over-reaching - Hands, wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm take the entire load – leading to fatigue and strain or sprain. - Shoulder injury if uncontrolled twisting or repeated cross centreline reaching. Both of these lead to increased risk of impingement.
MODIFICATIONS	- Avoid working with wrist in extension or flexion – maintain neutral as much as possible with a light grip on tool - Regular re-set stretches and exercises. - Don't reach across cold well to clean. Only clean the surfaces within easy reach - this allows closer movement so reduces reaching and torque on spine and shoulders - Ambidextrous use of upper limbs maintaining neutral postures of joints. This means if working on the right side, use right hand and left side with left hand. - Maintain neutral spine at all times. Use lower limb joints (hip, knee and ankle) to position body so that neutral spine can be maintained. - Keep body as close to task as possible: if safe to do so, lean hips onto edge of Bain Marie – to reduce demands on postural muscles. - Stand with joints in slight flexion. - Poorly-fitting gloves result in greater muscle use to manipulate equipment and muscles fatiguing faster.
ENVIRONMENTAL FACTORS	Environmental factors: Weather and temperature may play a role in determining susceptibility to injury – e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration. Length of sustained posture and overall level of force and movement repetition will vary based on the type of cold well being cleaned (i.e. moving mobile cold wells for deep clean) – plus how easy it is to access (i.e. whether the sneeze guard or side trays can be moved/removed for cleaning).
OTHER FACTORS	Other factors: Temporal factors will alter how staff move when performing the task. Pressure to move faster can lead to rushing and increased risk of injury. The state of the cold well will alter how much force is needed to clean it – if food stuff is stickier or it wasn't cleaned well previously then more cleaning will be required. Finally personal factors will come into play – strength, height, flexibility and cardiovascular fitness of staff member will alter how their body must be positioned and how it copes with the workload – better health = less risk.

JOB TASK ANALYSIS CLEAN DRAINS

PHYSICAL DEMAND

Medium - Heavy

MOVEMENTS

- Bilateral lower limb coordination for standing, walking, squatting, crouching (including hip flexion and extension, knee flexion and extension, ankle dorsi and plantar flexion).
- Upper body movements for removing drain cover and filter/trap including some shoulder flexion, elbow extension/flexion, finger flexion (for gripping) - under considerable load.
- Forearm activation for use of hose and/or mopping (including gripping, elbow flexion, extension, supination/pronation, shoulder abduction, flexion and rotation and wrist flexion/extension, radial/ulnar deviation).
- Spinal movements including forward bending (lumbar and thoracic flexion) and cervical rotation.

SUSTAINED RISK FACTORS

- Sustained elbow, wrist stabilisation and finger flexion for gripping during cleaning process.
- Standing
- Sustained squatting or crouching to clean drain.

REPETITIVE RISK FACTORS

- Frequent shoulder flexion and abduction, elbow and wrist flexion/extension - under load.
- Constant gripping with respect to handling drain removal and cleaning equipment.
- Frequent hip/knee flexion, extension - under load

RISK INJURY AREAS

- Lower back injuries, upper limb strain/sprain during pushing or pulling drain cover for removal/repositioning - considerable force required. Repetitive if large number of drains/large kitchen area.
- Back, shoulder, elbow, wrist if poor manual handling technique during
- Hand, wrist or elbow injuries during cleaning.

MODIFICATIONS

- Ensure the operator keeps neutral spine postures through pushing or pulling activities, avoiding flexion or awkward leaning (including removing drain cover, and cleaning the floor). Also when in crouching or squatting positions as much as possible while cleaning drain, emptying filter/trap.
- Exert only the grip force necessary to complete task.
- Care should be taken to avoid injuries to fingers e.g. pinch points during task. Note use of hand tool to move heavy drain covers rather than hands/fingers.

ENVIRONMENTAL FACTORS

Heat of Kitchen temperatures may increase risk for soft tissue injury. Crowding, human traffic will impact on when task is to be performed, e.g. at the end of a shift.

OTHER FACTORS

Individual factors including person's lifting capabilities, strength, build and fitness level may influence the likelihood of injury/incident.

EQUIPMENT	FORCE REQUIRED TO MOVE	
	PUSH	PULL
Drain cover (use of tool) lifted for cleaning	-	up to 20kg

JOB TASK ANALYSIS CLEAN FREEZERS LARGE COMMERCIAL

PHYSICAL DEMAND	Medium - Heavy
MOVEMENTS	• Bilateral lower limb coordination to stand, squat, walk and turn. • Hip flexion, extension, knee flexion and extension. Ankle dorsiflexion and plantar flexion. • Cervical flexion, extension, and rotation • Shoulder flexion bilateral or unilateral. Shoulder abduction/ adduction combined with varied degree of rotation • Bilateral wrists neutral with occasional unilateral wrist flexion, extension, radial and ulnar deviation. • Elbow flexion and extension with forearm pronation and supination • Flexion and extension of thumbs and fingers as required to grasp objects. • Moderate abdominal and spinal muscle contraction for stability. • Stooping or forward bending with forward reaching
SUSTAINED RISK FACTORS	• Sustained light gripping – finger and thumb flexion and adduction • Sustained arms in small amount of flexion and abduction
REPETITIVE RISK FACTORS	• Frequent shoulder flexion, extension, adduction and abduction. • Constant elbow flexion and extension. • Constant forearm pronation and supination. • Constant wrist extension and flexion • Frequent walking, squatting and lunging – hip plus knee flexion and extension. • Frequent ankle dorsiflexion and plantar flexion
RISK INJURY AREAS	• Back, shoulders, wrists, elbows and shoulder strains if maintain poor posture when performing upper limb activity. • Spine if fail to use legs (i.e. bend at hips, knees and ankles) to lower body and reach lower items. • Back muscles and spine structures if perform any part of task with flexed spine rather than maintaining neutral spine • Knees and backs if feet facing wrong way when performing task – twisting increases risk of injury. • Neck due to sustained posture, combined with upper limb muscle activity – risk of strain, sprain and muscle cramp. • Shoulder cumulative injury due to repeated tasks involving force whilst positioned in flexion and abduction- protracted in relation to spine. • Hands, wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm take the entire load – leading to fatigue and strain or sprain. • Shoulder injury if uncontrolled twisting or repeated cross centreline reaching. Both of these lead to increased risk of impingement.
MODIFICATIONS	• Pre-start warm up • Environment to be cleared and equipment possibly moved in order to clean – seek assistance. • Avoid working with wrist in extension or flexion – maintain neutral as much as possible with a light grip on tool. • Regular re-set stretches and postural exercises • Only clean same side as body is positioned - this allows closer movement so reduces reaching and torque on spine and shoulders. If working on the right side, use right hand and left side with left hand. • Maintain neutral spine at all times. Use lower limb joints to position body so that neutral spine can be maintained. • Keep body as close to task as possible – to reduce demands on postural muscles and avoid overreaching. Use Safety Step or similar as required. • Activate core musculature to stabilise at spine and keep knees and elbows in slight flexion to reduce risk of twisting sprain/strain. • Correctly fitting gloves – poorly fitting gloves result in greater muscle use to manipulate equipment and muscles fatiguing faster.
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury e.g. cold can lead to increased joint stiffness. Length of sustained posture and overall level of force and movement repetition will vary based on the type, shape and size of freezer being cleaned – plus how easy it is to access (i.e. whether the doors can be removed, and whether it can be moved away from other items). Seek assistance.
OTHER FACTORS	Temporal factors will alter how staff move when performing the task. Pressure to move faster can lead to behavioural changes – rushing and increasing risk of injury. The state of the freezer will alter how much force is needed to clean it – if food stuff is stickier or it wasn't cleaned well previously then more cleaning will be required. Finally personal factors will come into play; better strength, height, flexibility and CV fitness of staff member = less risk.

JOB TASK ANALYSIS CLEAN FRIDGES LARGE COMMERCIAL

PHYSICAL DEMAND	Medium - Heavy
MOVEMENTS	• Cervical flexion and extension • Shoulder flexion, extension, abduction, adduction and rotation • Elbow flexion and extension. • Forearm pronation and supination • Wrist extension and flexion, radial and ulnar deviation • Finger flexion and extension. • Gripping. • Walking / squatting / lunging • Hip flexion and extension • Knee flexion and extension • Ankle dorsiflexion and plantar flexion
SUSTAINED RISK FACTORS	• Cervical flexion to observe task. • Shoulder in slight abduction and flexion (to work in front of body)
REPETITIVE RISK FACTORS	• Constant shoulder flexion, extension, adduction and abduction. • Constant Elbow flexion and extension • Constant Forearm pronation and supination • Constant Wrist extension and flexion • Frequent walking squatting & lunging – hip flexion and extension, plus knee flexion and extension • Frequent Ankle dorsiflexion and plantar flexion.
RISK INJURY AREAS	• Back, shoulders, wrists, elbows and shoulder strains if using incorrect procedure such as failing to activate core muscles when using force during cleaning or using upper body strength rather than legs to lift. • Back if fail to bend at hips, knees and ankles to lower body and reach floor of fridge. • Knees and backs if feet facing wrong way when cleaning fridge. Joints and muscles are susceptible to injury in situations of twisting. • Various joints and muscles at risk if neutral positioning of all joints is not maintained.
MODIFICATIONS	• Pre-start warm up • Use ambidextrous cleaning method maintaining neutral posture of shoulder and hand. This means clean right side with right hand and left side with left hand, to reduce internal rotation of shoulder and risk of impingement. • Keep body as close to task as possible. Use all leg joints to lower body to correct height rather than just flexing at spine. • Use safety step where appropriate so not working with hands above shoulder height. • Move feet to position self to avoid twisting during cleaning of surface.
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury – e.g. cold can lead to increased joint stiffness. Length of sustained posture and overall level of force and movement repetition will vary based on the type and size of freezer being cleaned – plus how easy it is to access (i.e. whether the doors can be removed, and whether it can be moved away from other items). Seek assistance.
OTHER FACTORS	Temporal factors will alter how staff move when performing the task. Pressure to move faster can lead to behavioural changes – rushing and increasing risk of injury. The state of the fridge will alter how much force is needed to clean it – if food stuff is stickier or it wasn't cleaned well previously then more cleaning will be required. Finally personal factors will come into play; better strength, height, flexibility and CV fitness of staff member = less risk.

JOB TASK ANALYSIS CLEAN FRYERS

PHYSICAL DEMAND	Medium
MOVEMENTS	• Bilateral lower limb coordination to stand, squat, walk and turn. • Hip and knee flexion and extension. Ankle dorsiflexion and plantar flexion. • Cervical flexion and rotation • Shoulder flexion bilateral or unilateral. Shoulder abduction/ adduction combined with varied degree of rotation of shoulders while generating some force • Wrist flexion/extension, with radial and ulnar deviation. • Elbow flexion and extension, and forearm pronation and supination • Flexion and extension of thumbs and fingers as required to grip, while generating some force. • Abdominal and spinal muscle contraction for stability • Sustained standing, with stooping or forward bending depending on height of equipment
SUSTAINED RISK FACTORS	• Gripping: Finger and thumb flexion. Slight ulnar deviation at wrist. Forearm pronated • Standing • Cervical flexion
REPETITIVE RISK FACTORS	• Constant shoulder flexion, abduction, adduction and rotation • Constant elbow flexion, extension, pronation and supination • Constant wrist flexion, extension, radial and ulnar deviation • Frequent hip and knee flexion • Frequent ankle dorsiflexion and plantar flexion
RISK INJURY AREAS	• Back, neck, shoulder, wrist and elbow strains if maintain poor posture when performing standing upper limb activities. • Spine if fail to use legs (i.e. bend at hips, knees and ankles) to reach lower down, and/or without bracing (using 3 points of contact) when safe to do so. • Shoulder cumulative injury due to repeated tasks requiring use of force whilst positioned in various degrees of flexion and abduction, protracted in relation to spine. • Hands, wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm take the load – leading to fatigue and strain or sprain. • Shoulder injury if uncontrolled twisting or repeated cross centreline reaching. Both of these lead to increased risk of impingement. • Risk of burns.
MODIFICATIONS	• Regular re-set stretches and postural exercises. • Ambidextrous use of upper limbs. This means if working on the right side, use right hand and left side with left hand to reduce internal rotation of shoulder and risk of impingement • Maintain neutral spine at all times. Use lower limb joints (hip, knee and ankle) to position body so that neutral spine can be maintained. Bend at joints or adopt wide stance. • Keep body as close to task as possible– to reduce demands on postural muscles. Use non dominant hand to support body – lean onto side of fryer to prop body. • Activate core musculature to stabilise at spine and reduce risk of twisting sprain/strain. • Always move feet when turning, do not position upper body and feet facing different ways.
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury creating varied conditions for cleaners to work in – e.g. cold can lead to reduced circulation and tissue stiffness whereas heat may lead to higher level of dehydration. Length of sustained posture and overall level of force and movement repetition will vary based on the design, size and condition of the fryer.
OTHER FACTORS	Daily repetitions of an action and force required for the task will be determined both by condition of the fryer, quality of tools, chemical used and efficiency of chefs during cooking period (method - if they clean as they go to a certain extent etc.). Effect on staff will depend on physical factors such as strength, flexibility, and level of work hardening.

JOB TASK ANALYSIS CLEAN GYM EQUIPMENT

PHYSICAL DEMAND	Medium - Heavy
MOVEMENTS	- Hip flexion, extension, knee flexion and extension, ankle dorsiflexion and plantarflexion - at times under load. - Slight shoulder flexion bilateral or unilateral – sustained. Slight shoulder abduction/adduction - at times under load. - Unilateral/bilateral wrist flexion, extension, radial and ulnar deviation - at times under load. - Elbow flexion and extension concentric and eccentric control required plus forearm pronation and supination - at times under load. - Flexion and extension of thumbs and fingers as required to grasp item. - Palm open grasp – slight finger flexion plus adduction so palm and fingers used to grasp item. - Standing, stooping, walking, forward bending, squatting, crouching, lunging
SUSTAINED RISK FACTORS	- Cervical flexion to take note of walk path and area around equipment to be cleaned. - Grasp – grip of equipment/machine or cleaning equipment. - Standing (or other posture adopted for cleaning)
REPETITIVE RISK FACTORS	- Frequent shoulder flexion, abduction, adduction, and rotation. - Constant elbow flexion and/or extension, pronation and supination. - Frequent wrist flexion, extension, radial and ulnar deviation. - Frequent hip and knee flexion, ankle dorsiflexion and plantarflexion. - Cervical flexion and rotation. - Stooping, forward bending, crouch, squat, lunge
RISK INJURY AREAS	- Spine – if failing to use legs (i.e. bend at hips, knees and ankles) to lower body and reach lower items. This increases risk of strain and sprain if task is performed with flexed or overextended spine rather than neutral spine. - Neck due to sustained flexion, elongation of spinal muscles leads to poor blood flow and increased risk of injury. Neck strain, sprain and muscle cramp - Shoulder cumulative injury due to repeated tasks requiring use of force whilst positioned in various degrees of flexion and abduction, protracted in relation to spine. - Shoulders, elbows and wrists if poor technique – using upper body strength to perform movements rather than body weight and leg strength. - Hands, wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm take the entire load – leading to fatigue and strain or sprain. - Shoulder musculature with poor hand positioning, uncontrolled twisting or repeated cross centreline reaching. All lead to increased risk of impingement and strain.
MODIFICATIONS	- Pre-start warm up - Remove unnecessary equipment from room or if any weights have been left on the floor lift and return to storage areas carefully. Seek assistance if moving heavy items. - Regular postural re-set stretches and exercises. - Maintain neutral spine at all times. Use lower limb joints (hip, knee and ankle) to position body as close to task as possible to reduce demands on postural muscles. Use of safe step in event that part of the equipment is higher than shoulder height. - Lift items using lower limb muscles more than upper and spinal musculature. - If transporting equipment anywhere use two handed carry and move feet to face where placing it so that no injurious twisting of knees and spinal structures occurs. - Use power grip (whole hand) rather than pinch grips (fingers only). - Use ambidextrous cleaning method maintaining neutral postures of hand. This means cleaning right side with right hand and left side with left hand. - Clean with upper arm at side of body where possible to reduce the risk of impingement with sustained flexion and abduction of shoulder.
ENVIRONMENTAL FACTORS	Room layout, and weight, size and shape of equipment will alter position and range of joint movement demanded. Effects of temperature can increase risk of injury.
OTHER FACTORS	Stains or type of dirt and grease will alter how much force is required. Physical capabilities of staff (Cardiovascular fitness and strength) will alter how the forces affect them. Temporal factors will alter how staff move when performing the task, such as rushing due to feeling pressure to move faster can lead to increased risk of injury.

JOB TASK ANALYSIS CLEAN OVENS

PHYSICAL DEMAND	Light - Medium
MOVEMENTS	• Bilateral lower limb coordination to squat, crouch, stand, walk and turn. • Hip and, knee flexion and extension. Ankle dorsiflexion and plantar flexion. • Upper limb and cervical spine joint and musculature work together as head moves to observe action and upper limbs perform work. • Cervical flexion, extension, and rotation • Shoulder flexion (at times above shoulder/head height) and abduction/ adduction combined with varied degree of rotation. • Elbow flexion and extension with forearm pronation. • Wrist held neutral. • Flexion and extension of thumbs and fingers as required to grip item. • Moderate abdominal and spinal muscle contraction for stability • Occasional stooping or forward bending
SUSTAINED RISK FACTORS	• Cervical flexion with degree of rotation • Shoulder flexion • Elbow flexion and pronation • Gripping • Standing
REPETITIVE RISK FACTORS	• Hip, knee and ankle flexion and extension • Shoulder flexion and extension with varied amount of abduction and rotation. • Wrist radial and ulnar deviation • Finger flexion and thumb flexion
RISK INJURY AREAS	• Back, shoulders, wrists, elbows and shoulder strains if maintain poor posture when performing standing upper limb activities. • Back muscles and spine structures if fail to use legs (i.e. bend at hips, knees and ankles) and keep a neutral spine to reach lower down. This increases risk of strain and sprain • Knees and backs if twisting. • Neck due to sustained position that can lead to poor blood flow and increased risk of strain, sprain and muscle cramp. • Shoulder cumulative injury due to repeated tasks requiring use of force whilst positioned in various degrees of flexion and abduction. • Shoulders and wrists if poor technique – using upper body strength to perform movements rather than legs. • Hands, wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm take the load – leading to fatigue and strain or sprain. • Shoulder injury if uncontrolled twisting or repeated cross centreline reaching. Both of these lead to increased risk of impingement. • Risk of burns.
MODIFICATIONS	• Regular posture re-set stretches and exercises • Use of safety step in event that area to be cleaned is higher than shoulder height. • Ambidextrous use of upper limbs maintaining neutral position of joints. This means if working on the right side, use right hand and left side with left hand, to reduce internal rotation of shoulder and risk of impingement • Maintain neutral spine at all times. Use lower limb joints (hip, knee and ankle) to position body so that neutral spine can be maintained. • Keep lower limb joints in slight flexion when standing. • Activate core musculature to stabilise at spine and reduce risk of twisting sprain/strain. • Use a gentle controlling not heavy grip on the cleaning tool • Minimise arm movement and physical demand – use of chemicals, and self-cleaning functions.
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury – e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration. Length of sustained posture and overall level of force and movement repetition will vary based on the oven type, condition and size
OTHER FACTORS	Daily repetitions of an action and force required for the task will be determined both by state of the oven, quality of tools, chemical used and efficiency of method. Effect on staff will depend on physical factors such as strength, flexibility, and level of work hardening.

JOB TASK ANALYSIS

CLEAN PATHWAYS USING FOR EXAMPLE PATHSWEEPER, HIGH PRESSURE HOSE, BLOWER VAC, FLOOR SCRUBBER, BROOM

PHYSICAL DEMAND	Medium
MOVEMENTS	• Bilateral lower limb coordination to stand, walk and turn. • Moderate range and muscle activity of hip flexion, extension, knee flexion and extension. Ankle dorsiflexion and plantar flexion. • Cervical flexion and rotation • Slight shoulder flexion bilateral or unilateral – combined with rotation. • Elbow flexion and extension combined with forearm pronation and supination. • Flexion and extension of thumbs and fingers as required to grasp equipment. • Abdominal and spinal muscle contraction for stability
SUSTAINED RISK FACTORS	• Grip – finger and thumb flexion. Combined with ulnar rotation. • Shoulder and elbow stabilising musculature • Cervical flexion and rotation. • Elbow flexion and neutral forearm rotation. • Moderate abdominal and spinal muscle contraction for stability
REPETITIVE RISK FACTORS	• Frequent shoulder flexion, abduction and adduction. • Constant elbow flexion, extension, pronation and supination. • Constant wrist flexion, extension, radial and ulnar deviation. • Frequent hip and knee flexion and extension. • Frequent ankle dorsiflexion and plantar flexion.
RISK INJURY AREAS	• Spine if fail to use legs (i.e. bend at hips, knees and ankles) to lower body to the task and generate momentum. • Knees and spine if twist trunk to move equipment rather than feet. • Neck due to sustained flexion, elongation of spinal muscles leads to poor blood flow and increased risk of injury. Neck strain, sprain and muscle cramp. • Wrist elbows and shoulders strains if shoulder muscle tension, or high tension grip, and exposure to vibration. • Shoulder cumulative injury due to repeated internal and external rotation while shoulders protracted. • Shoulders and wrists if poor technique – using upper body strength to perform movements rather than body weight and leg strength.
MODIFICATIONS	• Use mechanised or power assisted equipment to minimise physical demand • If possible, blower vac should be worn on a harness so that upper limbs don't have to carry whole weight of the machine. • Regular maintenance of equipment will reduce force required to perform task. • Move to get the hard to reach places by moving body and using legs. The equipment should not be moved in an arc greater than 1m away from the body. • Use machine with upper arms kept close to body - to reduce risk of upper limb muscle tension, and impingement with sustained flexion and abduction of the shoulder and also excessive reaching. • Regular re-set stretches and exercises • Ambidextrous use of upper limbs maintaining neutral posture of all joints. • Maintain neutral spine at all times - use lower limb joints (hip, knee and ankle) to position body • Adequately plan sweeper path. Seek assistance to clear area obstructed by furniture. • Drive force applied to equipment from legs.
ENVIRONMENTAL FACTORS	Ground Surface type and gradient alters body position required to hold equipment in correct position. Effects of temperature can increase likelihood of injury – heat leading to dehydration, cold can lead to poor circulation to soft tissues.
OTHER FACTORS	Physical features of the employee are important in reducing risk of injury – greater strength, fitness and joint range of movement will reduce likelihood of injury. Quality and maintenance of tools will also reduce force and time required to perform job, particularly for larger/longer areas.

JOB TASK ANALYSIS CLEAN PIGEON HOLES

PHYSICAL DEMAND	Light - Medium
MOVEMENTS	• Hip flexion, extension, knee flexion and extension, ankle dorsiflexion and plantar flexion. • Cervical flexion, extension, and rotation. • Shoulder flexion bilateral or unilateral. Shoulder abduction/ adduction, combined with rotation. • Wrist extension, radial and ulnar deviation. • Small range elbow flexion and extension. • Forearm pronation and supination controlled. • Flexion and extension of thumbs and fingers as required for grasping item with moderate intensity. • Moderate abdominal and spinal muscle contraction for stability.
SUSTAINED RISK FACTORS	• Finger and thumb flexion to grip. • Standing – knees with slight flexion, hips neutral, feet flat. • Squatting – hip flexion, knee flexion and dorsiflexion of ankle. • Cervical flexion.
REPETITIVE RISK FACTORS	• Constant shoulder flexion, abduction, and rotation. • Constant elbow flexion, extension, pronation and supination. • Constant wrist flexion, extension, radial and ulnar deviation. • Frequent hip and knee flexion. • Frequent ankle dorsiflexion and plantar flexion.
RISK INJURY AREAS	• Spine if fail to use legs (i.e. bend at hips, knees and ankles) to lower body and reach lower items. • Shoulder cumulative injury due to repeated tasks requiring use of force whilst in flexion and abduction, protracted in relation to spine. • Hands, wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm take the load – leading to fatigue and strain or sprain. • Shoulder injury if uncontrolled twisting or repeated cross centreline reaching. Both of these lead to increased risk of impingement.
MODIFICATIONS	• Regular re-set stretches and postural exercises. • Ambidextrous use of upper limbs. This means if working on the right side, use right hand and left side with left hand, to reduce internal rotation of shoulder and risk of impingement. • Maintain neutral spine at all times. • Use lower limb joints (hip, knee and ankle) to position body so that neutral spine can be maintained. • Keep body as close to task as possible– to reduce demands on postural muscles. • Activate core musculature to stabilise at spine and reduce risk of twisting sprain/strain. • Always move feet when turning to avoid twisting.
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury creating varied conditions for cleaners to work in – e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration. Length of sustained posture, posture required, and overall level of force and movement repetition will vary based on the shelf design and room size.
OTHER FACTORS	Daily repetitions of an action will be determined both by state of the surface prior to cleaning and size of surfaces that must be cleaned. Behavioural factors can alter likelihood of injury – i.e. staff can choose to follow recommendations and alter hand position or body position to reduce risk. Finally physical factors such as height, strength and fitness will alter likelihood of an incident occurring.

JOB TASK ANALYSIS CLEAN POOL

PHYSICAL DEMAND	Medium
MOVEMENTS	• Cervical flexion and extension combined with varying degrees of rotation. • Bilateral shoulder flexion, extension, abduction, adduction, and varying degrees of rotation – while exerting force or under load. • Elbow flexion and extension, Forearm pronation and supination– while exerting force or under load. • Wrist extension and flexion, radial and ulnar deviation – while exerting force or under load. • Finger and thumb flexion and adduction to grip equipment. • Hip and knee flexion and extension, Ankle dorsiflexion and plantar flexion – at times under load, and to exert force. • Stooping, standing, forward bending, crouching, squatting, kneeling
SUSTAINED RISK FACTORS	• Sustained posture with neck flexion while performing upper limb activity – includes kneeling, crouching, stooping, standing, forward bend. • Sustained gripping handle or tools with finger and thumb flexion.
REPETITIVE RISK FACTORS	• Constant bilateral and unilateral shoulder flexion, extension, abduction and adduction. • Constant elbow flexion and extension plus forearm pronation and supination. • Frequent wrist extension, radial and ulnar deviation. • Frequent hip and knee flexion and extension, ankle dorsiflexion and plantar flexion. • Frequent stooping, standing, forward bending, crouching, squatting, kneeling
RISK INJURY AREAS	• Back muscles and spine structures, wrists, elbows and shoulder strains (cumulative or single event injuries) - if maintain poor manual handling techniques when performing cleaning tasks in various postures/positions. • Knees and back - if feet facing different direction to upper limbs. Joints and muscles are susceptible to injury in situations of twisting. • Neck due to sustained flexion, elongation of spinal muscles leads to poor blood flow and increased risk of injury. • Shoulders, elbows and wrists – if using poor technique such as standing still and sweeping using arms, rather than holding the handle and moving feet, body weight and leg strength for tool propulsion • Shoulder cumulative injury due to repeated tasks requiring use of force whilst positioned in varying degrees of flexion and abduction, protracted in relation to spine. • Shoulder injury if uncontrolled twisting or repeated cross centreline reaching. Both of these lead to increased risk of impingement. • Hands, wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm take the entire load – leading to fatigue and strain or sprain. • Pressure injury (neuralgic, bruising or blisters) if broom held with palm of hand on tip of broom. • Chemical exposure
MODIFICATIONS	• Utilise chemical and mechanical cleaning aids, such as auto pool vacuum and maintaining water quality. • Seek assistance, use mechanical aids/equipment for transporting equipment/stock/chemicals. • Always hold long handled equipment with both hands, ideally between shoulder and hip height. • Long handles on all cleaning equipment - more appropriate for staff of all heights. • Use a light but controlling grip as a heavy grip may lead to fatigue in hands, forearm muscles. • Minimise arm movement, preferably by using the legs to move cleaning equipment around, i.e. step or stride stance and / or walking to move the broom/vacuum/scoop net. • Regular posture re-set stretches to reduce loading of joints. • Use lower limb joints (hip, knee and ankle) to position body so that neutral spine can be maintained. • Stand with joints in slight flexion. • Correctly fitting gloves – poorly fitting gloves result in greater muscle use to grip item and muscles fatiguing faster. • Use power grip (whole hand) rather than pinch grip (fingers only).
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury – e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration.
OTHER FACTORS	Length of sustained posture and overall level of force and movement repetition will vary based on pool size, shape and current state. Daily repetitions of an action will be determined both by cleanliness and type of dirt in pool.

JOB TASK ANALYSIS CLEAN EXHAUST FANS / RANGEHOODS

PHYSICAL DEMAND	Medium
MOVEMENTS	• Bilateral lower limb coordination to stand, step and turn. • Hip and knee flexion and extension. Ankle dorsiflexion and plantar flexion. • Cervical flexion, extension, and rotation. • Shoulder flexion and abduction/ adduction, with external rotation. • Elbow flexion and extension concentric and eccentric. • Wrist neutral, occasional extension, radial and ulnar deviation. Forearm pronation • Flexion and extension of thumbs and fingers as required to grip cleaning tool. • Moderate abdominal and spinal muscle contraction
SUSTAINED RISK FACTORS	• Finger and thumb flexion to grip handle • Standing • Cervical extension • Moderate abdominal and spinal muscle contraction
REPETITIVE RISK FACTORS	• Constant shoulder flexion, abduction, adduction and rotation • Frequent overhead reaching • Constant elbow flexion, extension, pronation and supination • Constant wrist flexion, extension, radial and ulnar deviation • Frequent hip and knee flexion • Frequent ankle dorsiflexion and plantar flexion
RISK INJURY AREAS	• Spine if fail to use legs (i.e. bend at hips, knees and ankles) to lower body Back muscles and spine structures if perform any part of task with flexed or over-extended spine rather than maintaining neutral • Knees and backs if feet facing different way to trunk and upper limbs. (Twisting) • Neck due to sustained positioning and upper limb muscle use - leads to poor blood flow and increased risk of strain, sprain and muscle cramp. • Shoulder cumulative injury due to repeated tasks requiring use of force whilst positioned in flexion, overhead flexion and abduction • Hands, wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm take all of the load • Shoulder injury if uncontrolled twisting or repeated cross centreline reaching. Both lead to increased risk of impingement.
MODIFICATIONS	• Use telescopic pole where possible so that arm movement can stay below shoulder height. • Regular re-set stretches and postural exercises • Work with upper arms at sides of body, only allowing small flexion movements to reduce reaching and torque on spine and shoulders • Ambidextrous use of upper limbs maintaining neutral working position of hand. • Maintain neutral spine at all times. • Keep joints in slight flexion while standing. • Activate core musculature to stabilise at spine and reduce risk of twisting sprain/strain. • Use a gentle controlling power grip (whole hand) rather than pinch grips (fingers only)
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury creating varied conditions for cleaners to work in – e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration. Length of sustained posture, posture required, and overall level of force and movement repetition will vary based on the type of exhaust fan/range hood and size.
OTHER FACTORS	Daily repetitions of an action will be determined both by state of the surface prior to cleaning and size of surfaces that must be cleaned. Behavioural factors such as rushing can affect susceptibility to injury. Finally physical factors such as height, strength and fitness will alter likelihood of an incident occurring.

JOB TASK ANALYSIS CLEAN SHOWERS

PHYSICAL DEMAND	Medium
MOVEMENTS	• Shoulder flexion, abduction and rotation. • Elbow flexion and extension. • Forearm pronation and supination. • Wrist extension. • Finger flexion and extension. • Hip flexion and extension, Knee flexion and extension, Ankle dorsiflexion and plantar flexion. • Stand, crouch, squat, kneel
SUSTAINED RISK FACTORS	• Light gripping. • Shoulder flexion and abduction. • Standing, crouching, squat, kneel
REPETITIVE RISK FACTORS	• Shoulder flexion, extension, adduction and abduction, rotation • Elbow flexion and extension. • Forearm pronation and supination. • Wrist extension and flexion. • Hip flexion and extension • Knee flexion and extension. • Ankle dorsiflexion and plantar flexion.
RISK INJURY AREAS	• Back, shoulders, wrists, elbows and shoulder strains if using incorrect procedure such as failing to activate core muscles when using force during cleaning or using upper body strength rather than legs to lift. • Back if fail to bend at hips, knees and ankles to lower body and reach floor of shower. • Knees and back if feet are facing away from task. Joints and muscles are susceptible to injury in situations of twisting. • Back muscles and spine structures if perform any part of task with flexed spine rather than maintaining neutral spine. • Shoulders if generating force in internally rotated position and reaching above head, across centreline of body
MODIFICATIONS	• Apply chemical to walls of shower and left for adequate time reduces force required to clean. • Avoid using sponge to clean walls and floor of shower – this places wrist in extended high risk position. Instead use the long handled doodle-bug to clean. • Clean walls of shower prior to floors so there is no need to 'double up' and re-clean floor. • Use ambidextrous cleaning method maintaining 'thumbs up' working position of hand. This means clean right side with right hand and left side with left hand to reduce internal rotation of shoulder and risk of impingement.
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury – e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration. Length of sustained posture and overall level of force and movement repetition will vary based on the shower design and room size.
OTHER FACTORS	Daily repetitions of an action will be determined both by number of rooms cleaned and efficiency (method and state of room).

JOB TASK ANALYSIS

CLEAN SURFACES EXAMPLES DESKS, BENCHES, SHELVES, TABLES, WINDOW SILLS, HOTPLATES/STOVETOPS

PHYSICAL DEMAND	Medium
MOVEMENTS	• Cervical flexion and extension • Shoulder flexion, extension, abduction, adduction and rotation. • Elbow flexion and extension. • Forearm pronation and supination • Wrist extension and flexion, radial and ulnar deviation • Finger flexion and extension. • Walking / squatting /lunging: Hip flexion and extension, Knee flexion and extension, Ankle dorsiflexion and plantar flexion
SUSTAINED RISK FACTORS	• Cervical flexion to observe task. • Shoulder in slight abduction and flexion (to work in front of body) • Standing, gripping.
REPETITIVE RISK FACTORS	• Constant shoulder flexion, extension, adduction and abduction. • Constant Elbow flexion and extension • Constant Forearm pronation and supination • Constant Wrist extension and flexion • Frequent walking squatting & lunging – hip flexion and extension, plus knee flexion and extension • Frequent Ankle dorsiflexion and plantar flexion.
RISK INJURY AREAS	• Back, shoulders, wrists, elbows and shoulder strains if using incorrect posture while standing and reaching, such as failing to bend at hips, knees and ankles to lower body and reach surface, or if any part of task is performed with flexed spine rather than maintaining neutral spine. • Backs if fail to activate core muscles when using force during cleaning. • Knees and backs if feet facing different way to upper limbs. Joints and muscles are susceptible to injury in situations of twisting. • Shoulder cumulative injury due to repeated tasks requiring use of force whilst positioned in varying degrees of flexion and abduction, protracted in relation to spine. • Hands, wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm take the load – leading to fatigue and strain or sprain. • Shoulder injury if uncontrolled twisting or repeated cross centreline reaching. Both of these lead to increased risk of impingement.
MODIFICATIONS	• Regular re-set stretches and postural exercises. • Ambidextrous use of upper limbs. This means if working on the right side, use right hand and left side with left hand, to reduce internal rotation of shoulder and risk of impingement. • Maintain neutral spine at all times. Use lower limb joints (hip, knee and ankle) to position body so that neutral spine can be maintained. • Keep body as close to task as possible – to reduce demands on postural muscles. Use safety step where appropriate so not working with hands above shoulder height. • Activate core musculature to stabilise at spine and reduce risk of twisting sprain/strain. • Always move feet when turning, do not position upper body and feet facing different ways.
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration. Length of sustained posture, posture required, and overall level of force and movement repetition will vary based on surface area design and size.
OTHER FACTORS	Length of sustained posture and overall level of force and movement repetition will vary dependent on surface type, effective use of cleaning chemicals and tools, state of the surface prior to cleaning and size of area to be cleaned. Behavioural factors can alter likelihood of injury – i.e. staff can choose to follow recommendations and alter hand position or body position to reduce risk, rushing may lead to incident. Finally physical factors such as height, strength and fitness will alter likelihood of an incident occurring.

JOB TASK ANALYSIS CLEAN TOILETS

PHYSICAL DEMAND	Medium
MOVEMENTS	• Shoulder flexion, and abduction plus rotation of varying angles. • Elbow extension and flexion. • Forearm pronation and supination. • Wrist extension. • Finger flexion and extension. • Hip flexion and extension. • Knee flexion and extension. • Ankle dorsiflexion and plantar flexion. • Stooping, crouching, lunging, or forward bending with reaching.
SUSTAINED RISK FACTORS	• Sustained light gripping – finger flexion. • Sustained arms in small amount of abduction and forward flexion • Abdominal and spinal muscle activation.
REPETITIVE RISK FACTORS	• Constant shoulder flexion, extension, adduction and abduction. • Constant elbow flexion and extension. • Constant forearm pronation and supination. • Constant wrist extension and flexion. • Frequent work below knees which may include stooping, crouching, lunging, or forward bending – hip flexion and extension, plus knee flexion and extension. • Frequent ankle dorsiflexion and plantar flexion.
RISK INJURY AREAS	• Back, shoulders, wrists, elbows and shoulder strains • Back muscles and spine structures - if fail to bend at hips, knees and ankles to lower body and reach toilet and floor rather than maintaining neutral spine. • Knees and back - if feet facing different way to trunk. Joints and muscles are susceptible to injury in situations of twisting.
MODIFICATIONS	• Regular reset stretches. • Use appropriate tool that allows for efficient hand position and gripping. • Maintain neutral spine position by using legs to lower body, and all joints – rather than flexing through spine. • Use ambidextrous cleaning method maintaining neutral working position of hand – right side of toilet with right hand and left side with left hand, to reduce internal rotation of shoulder. • Use hand not being use to wipe to support body when wiping toilet (3 Point contact)
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury creating varied conditions for cleaners to work in – e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration.
OTHER FACTORS	Length of sustained posture and overall level of force and movement repetition will vary based on room size, number of toilets cleaned and efficiency (method used) and condition of toilet.

JOB TASK ANALYSIS CLEAN VEHICLE

PHYSICAL DEMAND	Medium
MOVEMENTS	• Bilateral lower limb coordination to stand, step and turn. • Hip and knee flexion and extension. Ankle dorsiflexion and plantar flexion. • Cervical flexion, extension, and rotation. • Shoulder flexion and abduction/ adduction, with external rotation. • Elbow flexion and extension concentric and eccentric. • Wrist neutral, occasional extension, radial and ulnar deviation. Forearm pronation • Flexion and extension of thumbs and fingers as required to grip cleaning tool. • Moderate abdominal and spinal muscle contraction
SUSTAINED RISK FACTORS	• Finger and thumb flexion to grip handle • Standing – knees with slight flexion, hips neutral. • Squatting – hip flexion, knee flexion and dorsiflexion of ankle. • Cervical extension • Moderate abdominal and spinal muscle contraction
REPETITIVE RISK FACTORS	• Shoulder flexion, abduction, adduction and rotation • Elbow flexion, extension, pronation and supination • Wrist flexion, extension, radial and ulnar deviation • Hip and knee flexion • Ankle dorsiflexion and plantar flexion
RISK INJURY AREAS	• Spine if fail to use legs (i.e. bend at hips, knees and ankles) to lower body and reach lower items. • Back muscles and spine structures if perform any part of task with flexed spine rather than maintaining neutral spine • Knees and back if feet facing different way to trunk and upper limbs. • Neck due to sustained positioning and use of attaching upper limb muscles - leads to poor blood flow and increased risk of strain, sprain and muscle cramp. • Wrist, elbow and shoulder strains if using incorrect technique such as standing still and only moving arms to move brush • Pressure injury (neuralgic, bruising or blisters) if handle held with palm of hand on tip of brush/broom • Shoulder cumulative injury due to repeated tasks requiring use of force whilst positioned in flexion and abduction • Hands, wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm take all of the load • Shoulder injury if uncontrolled twisting or repeated cross centreline reaching. Both of these lead to increased risk of impingement.
MODIFICATIONS	• Use telescopic pole where possible so that arm movement can stay below shoulder height. • Regular re-set stretches and postural exercises to return spine to neutral and lengthen muscles that tighten over time. • Work with upper arms at sides of body, only allowing small flexion movements to reduce reaching and torque on spine and shoulders • Ambidextrous use of upper limbs maintaining 'thumbs up' working position of hand. • Maintain neutral spine at all times. • Keep joints in slight flexion. • Activate core musculature to stabilise at spine and reduce risk of twisting sprain/strain. • Lift items using lower limb muscles more than upper and spinal musculature. • Use a gentle controlling power grip (whole hand) rather than pinch grip (fingers only)
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury creating varied conditions for cleaners to work in – e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration. Length of sustained posture, posture required, and overall level of force and movement repetition will vary based on the vehicle type and size.
OTHER FACTORS	Daily repetitions of an action will be determined both by state of the surface prior to cleaning and size of surfaces that must be cleaned. Behavioural factors can alter likelihood of injury – i.e. staff can choose to follow recommendations and alter hand position or body position to reduce risk. Physical factors such as height, strength and fitness will alter likelihood of an incident occurring.

JOB TASK ANALYSIS CLEAN WALLS EXAMPLES EXTERNAL BUILDING SURFACES, WINDOWS

PHYSICAL DEMAND	Medium - Heavy
MOVEMENTS	• Finger and thumb flexion, and adduction to grip cleaning equipment. • Shoulder flexion and extension, abduction and adduction • Elbow flexion and extension • Wrist flexion, extension. • Abdominal and spinal muscle contraction to stabilise the torso • Bilateral lower limb coordination. • Hip and knee flexion and extension • Ankle dorsiflexion and plantar flexion • Stooping – neck and or back
SUSTAINED RISK FACTORS	• Posture with neck extension and flexion to observe task • Moderate hand grip on mop/broom/squeegee/hose. • Sustained abdominal activation
REPETITIVE RISK FACTORS	• Constant shoulder flexion, extension, adduction and abduction. • Constant elbow flexion and extension • Frequent forearm pronation and supination • Constant wrist extension and flexion • Frequent walking squatting & lunging – hip flexion and extension, plus knee flexion and extension • Frequent ankle plantar and dorsi-flexion
RISK INJURY AREAS	• Sustained neck posture leading to increased muscular tension and long term wear and tear on the joints in the neck. • Wrist, elbow, shoulder and low back if incorrect techniques used (i.e. overuse of upper body and lack of movement through the legs), risk increases with increased weight of the wet mop head. • Spinal joints and knee joints if feet facing wrong way when using broom. Joints and muscles are susceptible to injury in situations of twisting.
MODIFICATIONS	• Pre-start warm up • Use both leg and arm movement to wring and remove mop from bucket. This avoids excessive arm movement or back movement and reduces risk of strain/sprain. • Regular reset stretches to correct posture resulting from sustained neck postures. • Always holding cleaning tools with both hands between hip and shoulder height. • Use a gentle controlling not heavy grip on the equipment handle • Minimise arm movement preferable by using the legs to move cleaning tools.
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury creating varied conditions for cleaners to work in – e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration.
OTHER FACTORS	Length of sustained posture and overall level of force and movement repetition will vary based on wall type, surface, height, and condition.

JOB TASK ANALYSIS CLEAN WASHER / DRYER / DOMESTIC DISHWASHER

PHYSICAL DEMAND	Medium
MOVEMENTS	• Bilateral lower limb coordination to squat, stand, walk and turn • Hip and, knee flexion and extension. Ankle dorsiflexion and plantar flexion • Cervical flexion, extension, and rotation • Shoulder flexion and abduction/ adduction combined with varied degree of rotation • Elbow flexion and extension with forearm supination and pronation • Wrist in neutral position where possible, with either radial or ulnar deviation • Flexion and extension of thumbs and fingers as required to grip cleaning cloth • Standing, stooping, forward bending
SUSTAINED RISK FACTORS	• Cervical flexion, extension and rotation • Shoulder and Elbow flexion • Grip on cleaning item • Standing/stooping/bending/squatting
REPETITIVE RISK FACTORS	• Frequent shoulder flexion, abduction, adduction, and rotation • Frequent elbow flexion and extension, pronation and supination • Frequent wrist flexion, extension, radial and ulnar deviation • Occasional hip and knee flexion, ankle dorsiflexion and plantar flexion • Frequent cervical flexion and rotation
RISK INJURY AREAS	• Back, shoulders, wrists, elbows and shoulder strains if maintain poor manual techniques when performing standing upper limb activities • Neck due to sustained positioning that can lead to poor blood flow and increased risk of strain, sprain and muscle cramp • Shoulder, wrist cumulative injury due to repeated tasks requiring use of force whilst positioned in various degrees of flexion and abduction or using upper body strength to perform movements rather than legs • Hands, wrists and forearms when inefficient grip or dominant hand only is used and smaller muscles of the hand and forearm take the load – leading to fatigue and strain or sprain • Shoulder injury if uncontrolled twisting or repeated cross centreline reaching. Both of these lead to increased risk of impingement
MODIFICATIONS	• Regular posture re-set stretches and exercises • Maintain neutral spine at all times. • Keep body close to the task: use of long-handled aids/cleaning equipment or squat/crouch to minimise stooping, overreaching. Use of safety step in event that area to be cleaned is higher than shoulder height, e.g. dryers. • Reach into machines (at varying heights) while maintaining 3 points of contact for stability and reduce load on postural muscles. • Keep joints in slight flexion when standing. • Ambidextrous use of upper limbs maintaining neutral joint positioning. This means if working on the right side, use right hand and left side with left hand, to reduce internal rotation of shoulder and risk of impingement • Use chemicals/self-cleaning functions of machines to minimise physical demand
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury – e.g. cold can lead to increased joint stiffness whereas heat may lead to higher levels of dehydration. Length of sustained posture and overall level of force and movement repetition will vary based on the positioning, size and number of washers/dryers.
OTHER FACTORS	Any spilling of water may lead to slippery floors that can alter stability requiring more muscular input. This may lead to greater fatigue of muscles, pressure on joints and other structures, therefore susceptibility to work related musculoskeletal injury.

JOB TASK ANALYSIS COMPUTER DUTIES

PHYSICAL DEMAND	Light
MOVEMENTS	• Prolonged sitting in office chair • Cervical spine rotation and flexion – forward head posture • Slight shoulder flexion bilateral or unilateral – sustained. Slight shoulder abduction/ adduction • Sustained elbow flexion. • Wrist radial/ulnar deviation. • Finger manipulation. • Sustained hip flexion • Sustained knee flexion
SUSTAINED RISK FACTORS	• Sustained hip flexion • Sustained knee flexion • Sustained eye focus on close item. • Sustained wrist extension • Sustained thigh compression against seat
REPETITIVE RISK FACTORS	• Constant elbow flexion and slight shoulder flexion - bilateral or unilateral. Slight shoulder abduction/ adduction. • Constant Wrist radial/ulnar deviation. • Constant Finger extension and flexion. • Cervical spine rotation and flexion and side flexion.
RISK INJURY AREAS	• Neck strain, sprain and muscle cramp. • Shoulder musculature with poor ergonomics. • Spine and Back musculature if poor sitting posture and pressure on structures. • Lower limb soft tissue discomfort – circulation and musculoskeletal – after long sitting with poor positioning. • Eye fatigue
MODIFICATIONS	• Ensure appropriate ergonomic workstation and chair set up including adequate lumbar support and footrest where applicable. • Ensure correct desk layout – document holder and screen height. • Allow regular posture breaks from sustained computer duties.
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury – e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration.
OTHER FACTORS	Length of sustained posture will vary.

JOB TASK ANALYSIS COOK - HOT PLATE / STOVE / FRYER

PHYSICAL DEMAND	Medium
MOVEMENTS	• Hip flexion, extension, knee flexion and extension, ankle dorsiflexion and plantar flexion. • Cervical flexion, extension, and rotation. • Shoulder flexion bilateral or unilateral. Slight shoulder abduction/ adduction. Combined with rotation. May be under load. • Wrist extension, radial and ulnar deviation. May be under load. • Elbow flexion and extension. May be under load. • Forearm pronation and supination. • Flexion and extension of thumbs and fingers as required for grasping item with moderate intensity. • Some stooping may be required
SUSTAINED RISK FACTORS	• Finger and thumb flexion to grip tool • Standing, possibly stooping. • Cervical flexion
REPETITIVE RISK FACTORS	• Constant shoulder flexion, abduction, adduction and rotation • Constant elbow flexion, extension, pronation and supination • Constant wrist flexion, extension, radial and ulnar deviation • Frequent hip and knee flexion • Frequent ankle dorsiflexion and plantar flexion
RISK INJURY AREAS	• Sustained unilateral upper limb activity – hand dominance • Back, neck, shoulders, wrists and elbows strains if poor posture when performing standing and reaching activities. • Back muscles and spine structures if fail to use legs (i.e. bend at hips, knees and ankles) to reach lower down. • Shoulder cumulative injury due to repeated tasks requiring use of any force whilst positioned in various degrees of flexion and abduction, protracted in relation to spine. • Hands, wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm take the load – leading to fatigue and strain or sprain. • Shoulder injury if uncontrolled twisting or repeated cross centreline reaching. Both of these lead to increased risk of impingement.
MODIFICATIONS	• Regular re-set stretches and postural breaks. • Ambidextrous use of upper limbs when safe to do so. This means if working on the right side, use right hand and left side with left hand, to reduce internal rotation of shoulder and risk of impingement • Maintain neutral spine at all times. Use lower limb joints (hip, knee and ankle) to position body so that neutral spine can be maintained. • Keep body as close to task as possible– to reduce demands on postural muscles. • Activate core musculature to stabilise at spine and reduce risk of twisting sprain/strain and increase efficiency of upper limb use. • Always move feet when turning to avoid twisting
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury – e.g. cold can lead to increased joint stiffness whereas heat (from cooking surfaces) may lead to higher level of dehydration. Length of sustained posture and overall level of force and movement repetition will vary based on the cooktop design, staffing, cooking method
OTHER FACTORS	Daily repetitions of an action will be determined both by number of residents that food is being prepared for, and organisation within the kitchen (including whether staff are able to share duties). Effect on staff will depend on physical factors such as strength, flexibility, and level of work hardening.

JOB TASK ANALYSIS DECORATE DINING ROOM/ SET UP FUNCTIONS

PHYSICAL DEMAND	Medium
MOVEMENTS	- Bilateral lower limb coordination to stand, walk and turn. - Full range of hip flexion, extension, knee flexion and extension. Ankle dorsiflexion and plantar flexion. - Cervical flexion, extension, and rotation - Thoracic and lumbar rotation and extension. - Full shoulder flexion bilateral or unilateral. Combined with abduction/ adduction and a varied degree of rotation. - Elbow flexion and extension with forearm pronation and supination. - Flexion and extension of thumbs and fingers as required to grasp items. - Moderate abdominal and spinal muscle contraction for stability - Forward bending, squatting, crouching, kneeling and lunging with and without load.
SUSTAINED RISK FACTORS	- Cervical flexion, extension, - Moderate abdominal and spinal muscle contraction for stability
REPETITIVE RISK FACTORS	- Frequent full range of hip flexion, extension, knee flexion and extension with and without load. Ankle dorsiflexion and plantar flexion. - Constant full shoulder flexion bilateral or unilateral. Combined with abduction/ adduction and a varied degree of rotation. - Constant elbow flexion and extension with forearm pronation and supination. - Constant flexion and extension of thumbs and fingers as required grasping item.
RISK INJURY AREAS	- Spine if fail to use legs (i.e. bend at hips, knees and ankles) to lower body and reach lower items. This increases risk of strain and sprain if task is performed with flexed or overextended spine. - Back muscles and spine structures if perform any part of task with flexed spine rather than maintaining neutral spine - Knees and spine if feet facing wrong way when reaching for items or to place items. Joints and muscles are susceptible to injury in situations of twisting. - Neck due to sustained flexion or extension – unnatural movement positions for the neck that lead to strain or sprain. - Shoulder cumulative injury due to repeated tasks requiring use of force whilst positioned in flexion and abduction, protracted in relation to spine. - Shoulders and wrists if poor technique – using upper body strength to perform movements rather than body weight and leg strength. - Hands, wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm take the entire load – leading to fatigue and strain or sprain. - Shoulder injury if uncontrolled twisting or repeated cross centerline reaching. Both of these lead to increased risk of impingement.
MODIFICATIONS	- Regular re-set stretches and postural exercises. - Use step ladder to try and maintain arm activity with hands below shoulder height. - Ambidextrous use of upper limbs maintaining neutral working position of hand. This means if working on the right side, use right hand and left side with left hand, to reduce internal rotation of shoulder and risk of impingement - Maintain neutral spine at all times. Use lower limb joints (hip, knee and ankle) to position body so that neutral spine can be maintained. - Stand with joints in slight flexion. - If transporting decorations use trolley or other equipment. If necessary, use two handed carry and move feet to face where placing it so that no injurious twisting of knees and spinal structures occurs.
ENVIRONMENTAL FACTORS	Room layout, furniture to be decorated, location decorations are required (wall, ceilings, tables) height of ceilings width of tables, all alter range of movement demanded from the decorator. Room temperature may play a role in determining susceptibility to injury – e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration.
OTHER FACTORS	Physical features of the decorator impact on risk of work related disorder – poor flexibility, balance or strength increase risk. Weight and dimensions of decorations – alter the amount of force required to manipulate the decorations. Behavioural changes such as rushing can increase risk..

JOB TASK ANALYSIS DIGGING INCLUDING FOR PLANTING, REPAIR WORK, MAINTENANCE

PHYSICAL DEMAND	Medium - Heavy
MOVEMENTS	- Sitting for driving vehicle and operating excavator (hip flexion, knee flexion, ankle dorsi flexion). - Bilateral lower limb coordination for standing, walking, lunging and crouching (including hip flexion and extension, knee flexion and extension, ankle dorsi and plantar flexion). - Upper body movements for lifting and carrying items, using hand tools: including shoulder flexion/extension, ab/adduction and varying degrees of rotation, forearm flexion/extension and pronation/supination, finger flexion/extension (gripping), wrist flexion/extension, ulnar/radial deviation. - Spinal movements including neck and back flexion, extension and rotation for stooping, forward bending
SUSTAINED RISK FACTORS	- Prolonged sitting during use of the excavator. - Sustained gripping, forward bending/stooping during use of the hand tools.
REPETITIVE RISK FACTORS	- Repetitive shoulder flexion and abduction during excavator activities (forward reaching). - Repetitive shoulder flexion and abduction (large range of movement) and elbow flexion during hand tool use, especially shovel, pick axe, matoch. - Repetitive spinal flexion and rotation when undertaking manual shovelling. - Repetitive lunge, squat, crouch
RISK INJURY AREAS	- Shoulder and back strain or sprain with upper body demands. - Back muscles and spine structures, legs and arms from stooping/bending digging activities. - Spinal sprain or strain through extended excavator operation (including exposure to vibration). - Slip, trip or fall hazards associated with work on uneven terrain.
MODIFICATIONS	- Pre-start warm up. - Task rotation or task breaks should be employed to reduce the risk of bodily strain through repetitious activities like operation of excavator and shovelling. - Spinal postures should be kept as neutral as possible through shovelling activities, keeping feet mobile and positioned in line with the spine to reduce risk of loaded rotation. Movement should be generated from legs. - Physical demand is minimised with the use of equipment such as excavator, bob cat. - Frequent posture re-set exercises and stretches.
ENVIRONMENTAL FACTORS	Heat and cold associated with outdoor temperatures increasing risk for soft tissue injury.
OTHER FACTORS	Individual factors contributing to risk of injury include a person's lifting capabilities, strength, and fitness level. Extent of onsite training, induction and knowledge around job processes and equipment.

JOB TASK ANALYSIS DISPENSE CHEMICALS

PHYSICAL DEMAND	Light
MOVEMENTS	- Bilateral lower limb coordination to sit, stand, walk and turn. - Moderate range of Hip flexion, extension, knee flexion and extension. Ankle dorsiflexion and plantar flexion. - Cervical flexion, extension, and rotation - Slight shoulder flexion unilateral – sustained. Slight shoulder abduction/ adduction - Upper limb and cervical spine joint and coinciding musculature use. - Elbow flexion and extension, forearm pronation and supination. - Wrist in neutral, forearm muscles stabilising. Flexion and extension of thumbs and fingers as required to grasp item with moderate intensity. - Moderate abdominal and spinal muscle contraction for stability
SUSTAINED RISK FACTORS	- Cervical flexion - Slight shoulder flexion unilateral – sustained. Slight shoulder abduction/ adduction - Upper limb and cervical spine joint and muscle activity - Moderate abdominal and spinal muscle contraction for stability
REPETITIVE RISK FACTORS	- Occasional moderate range of hip flexion, extension, knee flexion and extension. Ankle dorsiflexion and plantar flexion. - Frequent elbow flexion and extension, forearm pronation and supination. - Constant wrist in neutral, muscles stabilising. - Forearm and hand muscles active – finger flexion.
RISK INJURY AREAS	- Back, shoulders, wrists, elbows and shoulder strains if maintain poor posture when performing standing and reaching activities. - Back muscles and spine structures if perform any part of task with flexed spine rather than bending at hips, knees and ankles. - Knees and backs if feet facing different way to trunk when working - joints and muscles are susceptible to injury from twisting. - Neck strain, sprain and muscle cramp due to sustained flexion. - Shoulder injury if uncontrolled twisting or repeated cross centreline reaching. Both of these lead to increased risk of impingement.
MODIFICATIONS	- Regular re-set stretches and postural exercises - Position body close to the dispenser to reduce bending, reaching and twisting. - Ambidextrous use of upper limbs maintaining neutral working position of hand and shoulder. - Maintain neutral spine at all times. Use lower limb joints (hip, knee and ankle) to position body so that neutral spine can be maintained.
ENVIRONMENTAL FACTORS	Room layout, temperature, and furniture will alter position, force and range of movement required.
OTHER FACTORS	Time pressures/rushing. Hazardous substances.

JOB TASK ANALYSIS DISPOSE EXCESS FOOD

PHYSICAL DEMAND	Medium
MOVEMENTS	• Hip flexion, extension, knee flexion and extension. Ankle dorsiflexion and plantar flexion. • Cervical flexion and rotation • Shoulder bilateral flexion and abduction combined with rotation • Bilateral wrist flexion, extension, radial and ulnar deviation. • Elbow flexion and extension with forearm pronation and supination • Flexion and extension of thumbs and fingers as required to grip item • Abdominal and spinal muscle contraction for stability • Use of leg muscles and gluteals to stand and lift item. • Sustained standing – knees with slight flexion, hips neutral, feet flat.
SUSTAINED RISK FACTORS	• Standing – knees in slight flexion, feet apart. • Cervical flexion • Shoulder in slight abduction and flexion. • Abdominal and spinal muscle contraction for stability
REPETITIVE RISK FACTORS	• Cervical rotation • Small range elbow flexion and extension, and wrist movement • Shoulder flexion, abduction and adduction with varied rotation. • Finger and thumb flexion and adduction to grip items
RISK INJURY AREAS	• Spine if fail to use legs (i.e. bend at hips, knees and ankles) to lower body and reach lower items. This increases risk of strain and sprain • Back muscles and spine structures if perform any part of task with flexed spine rather than maintaining neutral spine • Knees and back if feet face different direction to trunk and hands. • Neck due to sustained flexion, combined with upper limb use. • Shoulder cumulative injury due to repeated tasks requiring use of force in flexion and abduction, protracted in relation to spine. • Hands, wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm take the load – leading to fatigue and strain or sprain. • Shoulder injury if uncontrolled twisting or repeated cross centreline reaching.
MODIFICATIONS	• Regular re-set stretches and postural exercises • Ambidextrous use of upper limbs maintaining 'thumbs up' working position of hand. • Maintain neutral spine at all times to ensure the correct curve of the spine can be maintained. Use lower limb joints (hip, knee and ankle) to position body so that neutral spine can be maintained. • Keep body as close to task as possible, adopt step stance if need, or lean hips onto bench– to reduce demands on postural muscles. • Keep joints in slight flexion. • Activate core musculature to stabilise at spine and reduce risk of twisting sprain/strain. • Avoid working with arms away from trunk. • Use power grip (whole hand) rather than pinch grips (fingers only)
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury creating varied conditions for cleaners to work in – e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration.
OTHER FACTORS	Muscular exertions and movements are impacted by direction of hand motions, grip technique and posture. The number of movements, time per action, and grip force are all impacted by the amount and type of food being tipped out – how 'stuck' to the tray or container shape. Individual physical features will alter how their body handles the forces or is able to work at surface – taller people must use legs to lower body and avoid slumping; shorter people may need to stand on a safety step.

JOB TASK ANALYSIS DRAGGING BRANCHES

PHYSICAL DEMAND	Heavy
MOVEMENTS	• Bilateral coordination of lower limbs to walk (varying directions), stand, turn, squat, crouch – under load. • Hip and knee flexion and extension of varying degrees plus hip ab/adduction ankle plantar and dorsiflexion – under load • Elbow flexion and extension, Shoulder flexion, abduction, adduction and extension (some rotation), Forearm pronation and supination – under load • Flexion and extension of wrist, thumbs and fingers as required to grasp – variable weight and size of branch. • Forward bending, stooping, some spinal rotation. • Cervical spine flexion and rotation.
SUSTAINED RISK FACTORS	• Upper limb, leg and trunk muscle activity (as above) under load while walking/moving to drag/carry branch. • Standing • Spinal rotation. • Finger and thumb flexion to grasp with variable force
REPETITIVE RISK FACTORS	• Stooping, forward bending, squatting for lifting/lowering • Hip and knee flexion and extension, ankle plantar and dorsiflexion. • Wrist, finger and thumb flexion and extension. • Shoulder flexion, extension, abduction. • Elbow flexion/extension, forearm pronation/supination
RISK INJURY AREAS	• Back muscles and spine structures – from loaded rotation and if fail to use legs (i.e. bend at hips, knees and ankles) to reach down. • Knees and back - if feet facing different way to direction of travel. Joints and muscles are susceptible to injury in situations of twisting. • Hands, wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm take the entire load – leading to fatigue and strain or sprain. • Shoulder cumulative injury due to requiring use of force whilst positioned in extension or flexion and abduction.
MODIFICATIONS	• Pre-start warm up. • Regular postural re-set stretches and exercises • Changing sides that the branch is carried on. Seek assistance. • Keep branch as close to body as possible to prevent over extending and abducting shoulder joint, as well as the need to twist. • Seek assistance from co-workers if available to carry larger branches together. • Generate movement for lifting and dragging using lower limb muscles more than upper and spinal musculature.
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury – e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration. Posture required and overall level of force and movement repetition will vary based on the size and number of branches and distance they must be moved. Ground surface type and slope alters body position required to hold branch in correct position, greater slopes are more difficult to maintain a neutral, non-twisted spinal position.
OTHER FACTORS	The size of the branch will determine overall level of force and length of movement repetition. Location of branch disposal will affect length of time upper body remains in sustained posture: position as close as possible to the branch/es. Consider use of equipment such as chainsaw, bob cat, chipper/mulcher to reduce physical demand

JOB TASK ANALYSIS DRIVE BUGGY

PHYSICAL DEMAND	Light
MOVEMENTS	• Some stooping, crouching, reaching may be required to perform vehicle pre-start checks. • Single leg weight bearing capability – to get in/out of vehicle. • Hip & knee flexion, ankle dorsi/plantarflexion. • Prolonged sitting • Slight shoulder flexion to reach steering wheel, with some internal & external rotation. Shoulder rotation, extension, abduction/adduction, or reaching across body for seatbelt. • Elbow flexion and extension, wrist flexion/extension. • Sustained grip
SUSTAINED RISK FACTORS	• Grip – finger flexion • Shoulder flexion and slight abduction • Postural muscle activity – to stabilise with buggy movement over terrain • Hip and knee flexion
REPETITIVE RISK FACTORS	• Occasional single leg weight bearing and propulsion to get into and out of the buggy. • Frequent reaching for vehicle controls and seatbelt. • Frequent flexion and extension of elbows • Frequent wrist flexion and extension, ulnar and radial deviation
RISK INJURY AREAS	• Cervical spine – joints and musculature with sustained muscle activity and potential for vibration and impact stress. • Hip and knee strain or sprain – both with twisting when getting into buggy and sustained positioning. • Lumbar spine – cumulative injury with sitting combined with vibration and jolting over rough terrain. • Shoulder strain – joint and muscle – with repeated small rotation movements with arm in protracted (forward) position.
MODIFICATIONS	• Regular re-set stretches to reduce risk of injury from tight muscles. • Ensure maintenance of buggy seats and general maintenance.
ENVIRONMENTAL FACTORS	Surface type will affect vibration that a person is subjected to – rougher terrain will lead to greater jarring on the body.
OTHER FACTORS	Maintenance of buggy will change what force is required or placed on the body - force required to turn wheels and jarring through the body for example. Length of sustained posture will be determined by amount of driving required.

JOB TASK ANALYSIS DRIVE BUS

PHYSICAL DEMAND	Light
MOVEMENTS	• Prolonged sitting • Moderate range of hip flexion, knee flexion and extension. Ankle dorsiflexion and plantar flexion. • Cervical flexion, extension, and rotation • Shoulder flexion, abduction, and adduction, internal and external rotation. • Bilateral wrist flexion, extension, radial and ulnar deviation. • Elbow flexion and extension with forearm pronation and supination • Flexion and extension of thumbs and fingers as required to grip. • Single leg weight bearing capability – to get in/out of vehicle
SUSTAINED RISK FACTORS	• Sitting – hip and knee flexion. • Elbow flexion. • Finger and thumb flexion
REPETITIVE RISK FACTORS	• Cervical rotation, flexion and extension. • Shoulder flexion and abduction with internal or external rotation • Knee extension and coordinated ankle dorsi and plantar flexion
RISK INJURY AREAS	• Spine and back musculature if poor sitting posture and pressure on structures rather than maintaining neutral spine - particularly with regular or sustained sitting • Neck due to sustained positioning combined with use of upper limb muscles – leads to poor blood flow and increased risk of strain, sprain and cramp. • Shoulder cumulative injury due to repeated tasks requiring use of force whilst positioned in various degrees of flexion and abduction, protracted in relation to spine. • Shoulder injury if uncontrolled twisting or repeated cross centreline reaching. Both of these lead to increased risk of impingement. • Lower limb soft tissue discomfort due to poor circulation and lack of flexibility after prolonged sitting with poor positioning and pressure on soft tissue.
MODIFICATIONS	• Ensure seat height allows hips to be same height as knees. • Seat should be close enough to pedals that they are able to depress completely without coming away from back of seat. • Angle of seatback should be reclined at 100-110 degrees to reduce pressure on discs in lumbar spine. Tilt of seat cushion should allow it to support your entire thigh without pressure being placed on particular areas • Adjust headrest so it rests in middle of the head. • Adjust lumbar support so sits in lumbar curve to passively maintain neutral curves – add lumbar cushion if the seat is not adjustable • Bring steering wheel forward to minimise reach to reduce upper arm movement and strain on neck and upper back. • Hold wheel at 9 and 3 O'clock positions or lower – this allows reduction of shoulder muscle use – avoid holding wheel near the top • Adjust mirrors once seated correctly – this will remind to reposition if start to slouch. • Regularly perform re-set stretches and postural exercises - no more than 1 hour of constant sitting
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining the body's susceptibility to injury – e.g. cold can lead to reduced circulation, and increased joint stiffness whereas heat may lead to higher level of dehydration and slower reaction time. Furniture adjustability will also alter what position must be adopted to drive vehicle.
OTHER FACTORS	Daily repetitions of an action will be determined both by number of trips and shape of road – more curves = more joint flexion to operate wheel. State of the road surface will alter vibration on the body. Behavioural factors can alter likelihood of injury – i.e. staff can choose to follow recommendations and alter hand position or body position to reduce risk. Physical factors such as height, strength and fitness will alter likelihood of an incident occurring.

JOB TASK ANALYSIS DRIVE RUBBISH TRUCK / TRACTOR

PHYSICAL DEMAND	Light
MOVEMENTS	• Prolonged sitting • Moderate to full range of hip flexion, knee flexion and extension. Ankle dorsiflexion and plantar flexion. • Cervical flexion, extension, and rotation • Shoulder flexion. Abduction/ adduction plus internal and external rotation. • Bilateral wrist flexion, extension, radial and ulnar deviation. • Elbow flexion and extension with forearm pronation and supination • Flexion and extension of thumbs and fingers as required to grip. • Single leg weight bearing capability with some upper limb weight bearing – to climb in/out of vehicle
SUSTAINED RISK FACTORS	• Sitting – hip and knee flexion. • Cervical postural muscle activation - sustained rotation, flexion • Spinal and abdominal muscle activation • Elbow flexion. • Finger and thumb flexion • Sustained hand positioning for controls
REPETITIVE RISK FACTORS	• Cervical rotation, flexion and extension. • Shoulder flexion and abduction with internal or external rotation • Knee extension and coordinated ankle dorsi and plantar flexion • Repetitive finger manipulation
RISK INJURY AREAS	• Spine and back musculature if poor sitting posture and pressure on structures • Neck and hands/wrist due to poor posture and/or sustained positioning combined with use of muscles – leads to poor blood flow and increased risk of strain, sprain and cramp. • Shoulder cumulative injury due to repeated tasks requiring variable use of force whilst positioned in various degrees of flexion and abduction, protracted in relation to spine. • Shoulder injury if uncontrolled twisting or repeated cross-centreline reaching. Both of these lead to increased risk of impingement. • Lower limb soft tissue discomfort due to poor circulation and lack of musculoskeletal flexibility after long sitting with poor positioning and pressure on soft tissue.
MODIFICATIONS	• Prestart warm up before climbing into tractor/ rubbish truck if poor flexibility / range of movement. • Ensure seat height allows hips to be same height as your knees if possible. • Seat should be close enough to pedals that able to depress completely without coming away from back of seat. • Angle of seatback should be reclined at 100-110 degrees to reduce pressure on discs in lumbar spine. Tilt of seat cushion should allow it to supports your entire thigh without pressure being placed on particular areas • Adjust headrest so it rests in middle of the head. • Adjust lumbar support so sits in lumbar curve assists to passively maintain neutral curves – add lumbar cushion if the seat not adjustable • Bring steering wheel forward to minimise reach to reduce upper arm movement and strain on neck and upper back. • Hold wheel at 9 and 3 O'clock positions or lower – this allows reduction of shoulder muscle use – avoid holding wheel near the top • Adjust mirrors once seated correctly – this will remind to reposition if start to slouch. • Regularly schedule and take posture breaks, with movement, re-set stretches and postural exercises.
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining the body's susceptibility to injury – e.g. cold can lead to reduced circulation, and increased joint stiffness whereas heat may lead to higher level of dehydration and slower reaction time. Seat adjustability, ergonomics of cockpit will also alter what position must be adopted to drive vehicle.
OTHER FACTORS	Daily repetitions of an action will be determined both by number of trips and shape of road – more bends in the road = more joint flexion to steer. State of the road surface will alter vibration on body too. Behavioural factors can alter likelihood of injury – i.e. staff can choose to follow recommendations and alter hand position or body position to reduce risk. Finally physical factors such as height, strength and fitness will alter likelihood of an incident occurring

JOB TASK ANALYSIS DRIVE VEHICLE

PHYSICAL DEMAND	Light
MOVEMENTS	• Prolonged sitting • Moderate range of hip flexion, knee flexion and extension. Ankle dorsiflexion and plantar flexion. • Cervical flexion, extension, and rotation • Shoulder flexion. Abduction/ adduction plus internal and external rotation. • Bilateral wrist flexion, extension, radial and ulnar deviation. • Elbow flexion and extension with forearm pronation and supination • Flexion and extension of thumbs and fingers as required to grip. • Single leg weight bearing capability – to get in/out of vehicle
SUSTAINED RISK FACTORS	• Sitting – hip and knee flexion. • Cervical postural muscle activation • Spinal and abdominal muscle activation • Elbow flexion. • Finger and thumb flexion
REPETITIVE RISK FACTORS	• Cervical rotation, flexion and extension. • Shoulder flexion and abduction with internal or external rotation • Knee extension and coordinated ankle dorsi and plantar flexion
RISK INJURY AREAS	• Spine and Back musculature if poor sitting posture and pressure on structures rather than maintaining neutral spine - particularly with regular or sustained sitting • Neck due to sustained postures combined with use of upper limb muscles – leads to poor blood flow and increased risk of strain, sprain and cramp. • Shoulder cumulative injury due to repeated tasks whilst positioned in various degrees of flexion and abduction, protracted in relation to spine. • Shoulder injury if uncontrolled twisting or repeated cross centreline reaching. Both of these lead to increased risk of impingement. • Lower limb soft tissue discomfort due to poor circulation and lack of musculoskeletal flexibility after long sitting with poor positioning and pressure on soft tissue.
MODIFICATIONS	• Ensure seat height allows hips to be same height as knees. • Seat should be close enough to pedals that able to depress completely without coming away from back of seat. • Angle of seatback should be reclined at 100-110 degrees to reduce pressure on discs in lumbar spine. Tilt of seat cushion should allow it to supports entire thigh without pressure being placed on particular areas • Adjust headrest so it rests in middle of the head. • Adjust lumbar support so sits in lumbar curve assists to passively maintain neutral curves – add lumbar cushion if the seat not adjustable • Bring steering wheel forward to minimise reach to reduce upper arm movement and strain on neck and upper back. • Hold wheel at 9 and 3 O'clock positions or lower – this allows reduction of shoulder muscle use – avoid holding wheel near the top • Adjust mirrors once seated correctly – this will remind to reposition if start to slouch. • Regularly perform re-set stretches and postural exercises - no more than 1 hour of constant sitting
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining the body's susceptibility to injury – e.g. cold can lead to reduced circulation, and increased joint stiffness whereas heat may lead to higher level of dehydration and slower reaction time. Seat adjustment will also alter what position must be adopted to drive vehicle.
OTHER FACTORS	Daily repetitions of an action will be determined both by number of trips and shape of road – more bends in the road = more joint flexion to steer. State of the road surface will alter vibration on body too. Behavioural factors can alter likelihood of injury – i.e. staff can choose to follow recommendations and alter hand position or body position to reduce risk. Finally physical factors such as height, strength and fitness will alter likelihood of an incident occurring.

JOB TASK ANALYSIS DUSTING

PHYSICAL DEMAND	Light - Medium
MOVEMENTS	• Cervical flexion and extension • Shoulder flexion, extension, abduction, adduction and rotation. • Elbow flexion and extension. • Forearm pronation and supination • Wrist extension and flexion, radial and ulnar deviation • Finger flexion and extension. • Gripping of cleaning equipment. • Walking / squatting / lunging requiring: hip flexion and extension, knee flexion and extension, ankle dorsiflexion and plantar flexion
SUSTAINED RISK FACTORS	• Cervical flexion to observe task. • Shoulder in slight abduction and flexion (to work in front of body)
REPETITIVE RISK FACTORS	• Constant Shoulder flexion, extension, adduction and abduction. • Constant Elbow flexion and extension • Constant Forearm pronation and supination • Constant Wrist extension and flexion • Constant gripping • Frequent walking squatting & lunging – hip flexion and extension, plus knee flexion and extension • Frequent Ankle dorsiflexion and plantar flexion.
RISK INJURY AREAS	• Back, shoulders, wrists, elbows and shoulder strains if using inefficient posture such as failing to activate core muscles when using force during cleaning or over-reaching. • Backs if fail to bend at hips, knees and ankles to lower body and reach surface • Various limb and back joints and muscles are susceptible to injury when twisting. • Back muscles and spine structures if perform any part of task with flexed spine rather than maintaining neutral spine
MODIFICATIONS	• Use ambidextrous cleaning method maintaining efficient joint positioning of the arm and hand. Avoid crossing the midline of the body to reach, to reduce internal rotation of shoulder and risk of impingement. • Use all leg joints to lower body to appropriate level for the task rather than just flexing at spine. Similarly, use of long handled aids to avoid stooping. • Use safety step and long handled aids/equipment where appropriate so not working with hands above shoulder height. • Move feet and face the task, to avoid twisting during cleaning of surface.
ENVIRONMENTAL FACTORS	Variable and extreme weather and temperature may play a role in determining susceptibility to injury– e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration.
OTHER FACTORS	Length of sustained posture and overall level of force and movement repetition will vary based on the furniture type, height, condition, surface and size. Dust inhalation.

JOB TASK ANALYSIS EMPTY DESK DUSTBINS

PHYSICAL DEMAND	Light - Medium
MOVEMENTS	- Shoulder flexion, extension, abduction, adduction and some rotation. - Elbow extension. Forearm pronation and supination - Wrist extension, Finger flexion and extension - Walking / squatting /lunging - Hip flexion and extension, Knee flexion and extension, Ankle dorsiflexion and plantar flexion. - Lunging, crouching, stooping, bending, reaching, grasping and lifting small waste bins
SUSTAINED RISK FACTORS	- Standing - Cervical flexion. - Postural muscle activation.
REPETITIVE RISK FACTORS	- Moderately forceful finger flexion and wrist movement for gripping - Elbow full ROM, Forearm pronation and supination, radial and ulnar deviation - Wrist full ROM. - Weight shift from foot to foot, hip flexion and extension - Ankle dorsiflexion and plantar flexion. - Knee flexion and extension plus lower limb muscle activation to lift items
RISK INJURY AREAS	- Back, shoulders, wrists, elbows and shoulder strains if using incorrect method such as failing to activate core muscles, or using upper body strength rather legs to lift. - Back muscles and spinal structures if perform task with flexed spine rather than maintaining neutral spine and / or if fail to bend at hips, knees and ankles to lower body and take hold of bin.
MODIFICATIONS	- Tie off existing liner correctly and test weight before lifting so able to use muscles to compensate for load and choose correct technique. - Keep body as close to task as possible. This will reduce load on postural muscles and reduce inclination to work with arms away from side of body. - Activate core musculature to stabilise spine increase muscle readiness, and reduce risk of twisting sprain/strain. - Lift items using lower limb muscles at the same time as upper limb muscles to reduce load from upper limb. - If smooth wall in bin drill small holes in side of bin to reduce friction and force required to remove bag.
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration.
OTHER FACTORS	Length of sustained posture and overall level of force and movement will vary based on the furniture type, status and room size. Daily repetitions of an action will be determined both by number of rooms cleaned and efficiency (method and state of room). Variable weight of bin, and friction between bin liner and bin requires modulation of force required to complete task. Bending required to access bin will also be determined by location of the bin.

JOB TASK ANALYSIS FILL GAS BOTTLES

PHYSICAL DEMAND	Light
MOVEMENTS	- Bilateral lower limb coordination to, stand, walk and turn: with and without load. - Moderate range of hip flexion, extension, knee flexion and extension. Ankle dorsiflexion and plantar flexion. - Cervical flexion, extension, and rotation - Slight shoulder flexion unilateral – sustained. Shoulder abduction/ adduction - Elbow flexion and extension, forearm pronation and supination. - Wrist in neutral, forearm muscles stabilising. Flexion and extension of thumbs and fingers as required grasping item with moderate intensity. - Forward bending, squatting and crouching: with and without load.
SUSTAINED RISK FACTORS	- Cervical flexion - Slight shoulder flexion unilateral – sustained. Slight shoulder abduction/ adduction - Upper limb and cervical spine joint and muscle activity - Constant wrist in neutral, muscles stabilising.
REPETITIVE RISK FACTORS	- Occasional moderate range of hip flexion, extension, knee flexion and extension. Ankle dorsiflexion and plantar flexion. - Frequent elbow flexion and extension, forearm pronation and supination. - Forearm and hand muscles active – finger flexion. - Forward bending, squatting and crouching with and without load.
RISK INJURY AREAS	- Back, shoulders, wrists, elbows and shoulder strains if maintain poor posture or manual handling techniques when performing standing and reaching activities. - Back muscles and spine structures if perform any part of task with flexed spine rather than bending at hips, knees and ankles. - Knees and backs if feet facing different way to trunk when working - joints and muscles are susceptible to injury from twisting. - Neck strain, sprain and muscle cramp due to sustained flexion. - Shoulder injury if uncontrolled twisting or repeated cross centerline reaching. Both of these lead to increased risk of impingement.
MODIFICATIONS	- Regular re-set stretches and postural exercises - Position body close to the dispenser to reduce bending, reaching and twisting. - Ambidextrous use of upper limbs maintaining neutral working position of hand and shoulder. - Maintain neutral spine at all times. Use lower limb joints (hip, knee and ankle) to position body so that neutral spine can be maintained.
ENVIRONMENTAL FACTORS	Position of gas supply connection will change the postures, force and range of movement required. Weather and temperature may play a role in determining susceptibility to injury– e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration
OTHER FACTORS	Time pressures/rushing. Volume and number of containers to be filled. Hazardous substances.

JOB TASK ANALYSIS FOLD AND SORT LINEN

PHYSICAL DEMAND	Medium
MOVEMENTS	• Hip flexion, extension, knee flexion and extension, ankle dorsiflexion and plantar flexion. • Cervical flexion, extension, and rotation. • Shoulder flexion bilateral or unilateral. Shoulder abduction/ adduction. Combined with rotation • Wrist extension, radial and ulnar deviation. • Small range elbow flexion and extension. • Forearm pronation and supination controlled. • Flexion and extension of thumbs and fingers as required for grasping item. • Forward bending, squatting, crouching and lunging with and without load • Moderate abdominal and spinal muscle contraction for stability.
SUSTAINED RISK FACTORS	• Finger and thumb flexion to grip linen • Standing – knees with slight flexion, hips neutral, feet flat. • Cervical flexion / stoop • Lumbar flexion/ stoop • Moderate abdominal and spinal muscle activation.
REPETITIVE RISK FACTORS	• Constant shoulder flexion, abduction, adduction and rotation • Constant elbow flexion, extension, with forearm pronation and supination • Constant wrist flexion, extension, radial and ulnar deviation • Frequent hip and knee flexion and extension with and without load • Frequent ankle dorsiflexion and plantar flexion
RISK INJURY AREAS	• Back, neck, shoulders, wrists and elbows strains if maintain poor posture when performing standing and reaching activities. • Spine if fail to use legs (i.e. bend at hips, knees and ankles) to lower body, and/ or twisting and reach lower items. • Shoulder cumulative injury due to repeated tasks requiring use of force whilst positioned in various degrees of flexion and abduction, protracted in relation to spine. • Hands, wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm take the load – leading to fatigue and strain or sprain. • Shoulder injury if uncontrolled twisting or repeated cross centreline reaching. Both of these lead to increased risk of impingement.
MODIFICATIONS	• Correctly fitting gloves – poorly fitting gloves result in greater muscle use to manipulate linen and muscles fatiguing faster • Do not sort on the floor if possible – this leads to awkward bending and more lifting. Instead sort laundry on tables or sorting belts that prevent bending and lifting. Table must be large enough and cleaned regularly. • Regular re-set stretches and postural exercises. • Ambidextrous use of upper limbs. This means use both hands equally. • Work in 'neutral wrist position to reduce internal rotation of shoulder and risk of impingement • Avoid pinch grip, use fingers and palm to perform task – power or external precision grip will not fatigue hand musculature as quickly. • Maintain neutral spine at all times. Use lower limb joints (hip, knee and ankle) to position body • Keep body as close to task as possible. • Anti-fatigue matting will help to reduce lower back and limb issues. • Activate core musculature to stabilise at spine and reduce risk of twisting • Always move feet when turning to avoid twisting. Do not position upper body and feet facing different ways.
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury– e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration. Length of sustained posture and overall level of force and movement repetition will vary based on the bench height and space. Floor surface can also alter pressure on lower limb and spine.
OTHER FACTORS	Daily repetitions of an action will be determined by amount of linen being folded, type of linen, and organisation within the team (whether staff are able to share duties). Effect on staff will depend on physical factors such as strength, flexibility, fatigue, and level of work hardening

JOB TASK ANALYSIS HAND WORK – PASTRY & DOUGH

PHYSICAL DEMAND	Medium
MOVEMENTS	• Cervical flexion and rotation • Upper limb movements while also generating force: • Slight shoulder flexion bilateral or unilateral. Slight shoulder abduction/ adduction combined with varied degree of rotation • Bilateral wrist flexion, extension, radial and ulnar deviation. • Elbow flexion and extension combined with forearm pronation and supination. • Flexion and extension of thumbs and fingers as required to grasp tools or ingredients. • Finger manipulation. • Moderate abdominal and spinal muscle contraction for stability
SUSTAINED RISK FACTORS	• Standing • Cervical flexion • Shoulder in slight abduction and flexion. • Finger and thumb flexion to grip tool for some tasks
REPETITIVE RISK FACTORS	• Cervical rotation • Wrist flexion or extension with ulnar or radial deviation. • Small range elbow flexion and extension • Shoulder flexion, abduction and adduction with varied rotation
RISK INJURY AREAS	• Shoulder strain cumulative injury with poor posture and/or moderate to high force demanded. • Elbow and wrists strain and strain or cumulative injury. • Lower back – with long periods spent standing on hard surface, especially if poor posture is maintained, as in stooping to reach bench • Hip and Knee joints and leg muscles when standing for long periods of time • Spine if fail to use legs (i.e. bend at hips, knees and ankles) to lower body and perform task with flexed spine rather than maintaining neutral spine. • Neck due to sustained flexion, elongation of spinal muscles leads to poor blood flow and increased risk of injury. Neck strain, sprain and muscle cramp. • Hands, wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm take the entire load – leading to fatigue and strain or sprain.
MODIFICATIONS	• Provide utensils and knives with ergonomic handles designed for comfort and efficient use of hand and forearm muscles in gripping. • Workstation height and inclination correct for task will alter force and postural requirements. A table at elbow height is ideal. Use cutting boards, raised bench, or leg movement to create this. • Use equipment/utensils where possible to reduce physical demand • Regular re-set stretches and postural breaks • Ambidextrous use of upper limbs maintaining 'thumbs up' working position of hand. • Maintain neutral spine at all times. Use lower limb joints (hip, knee and ankle) to position body so that neutral spine can be maintained. • Keep body as close to task as possible, lean hips onto bench– to reduce demands on postural muscles. • Keep joints in slight flexion while standing • Activate core musculature to stabilise at spine and reduce risk of twisting sprain/strain.
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury – e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration.
OTHER FACTORS	Muscular exertions and movements are impacted by direction of hand motions, grip technique and posture. Motor patterns and movements vary with experience and symptoms of pain. The number of movements, time per action, and grip force are all impacted by the type of food being processed or created. Individual physical features will alter how their body handles the forces or is able to work at surface – taller must use legs to lower body and avoid stooping.

JOB TASK ANALYSIS KEY MANAGEMENT / ROOM CHECK IN

PHYSICAL DEMAND	Light
MOVEMENTS	• Cervical flexion, extension, and rotation • Shoulder flexion, extension, abduction, rotation. • Often one-sided: Elbow flexion and extension, forearm pronation and supination, wrist flexion/extension and ulnar/radial deviation. • Flexion and extension of thumbs and fingers as required to grasp. • Moderate abdominal and spinal muscle contraction for stability • Bilateral lower limb coordination to squat, lunge, stand, walk and turn. • Hip flexion and extension. Knee flexion and extension. Ankle Dorsiflexion and plantar flexion
SUSTAINED RISK FACTORS	• Upper limb and spinal muscle activity – to control flexion and rotation of neck and or back depending on location of keys, ease of access.
REPETITIVE RISK FACTORS	• Fine motor use of hands – finger flexion and extension – keying, making new tags and collecting keys • Occasional elbow flexion and extension • Frequent shoulder flexion and extension • Frequent flexion and extension of fingers, hips and knees.
RISK INJURY AREAS	• Cervical spine joints and musculature • Back, shoulders, wrists, elbows and shoulder cumulative injuries and strains if maintain poor posture when performing standing and reaching activities, particularly overhead or away from body. • Backs if fail to bend at hips, knees and ankles to lower body and reach lower items. • Back muscles and spine structures if perform any part of task with flexed spine rather than maintaining neutral spine – particularly with frequent or sustained sitting, stooping or standing. • Knees and backs if feet facing wrong way when reaching for keys or passing to resident. Joints and muscles are susceptible to injury in situations of twisting.
MODIFICATIONS	• Appropriate Office Ergonomic set-up. • Regular re-set stretches • Keys hung below shoulder height so that above shoulder height movement avoided. • Use of safety step in event that keys are hung higher than shoulder height. • Key wall not to have shelf or desk in front – this allows closer reaching range of movement so reduces reaching and torque on spine and shoulders. • Key storage, e.g. in drawers, between hip and chest height to minimise stooping. • Ambidextrous use of upper limbs. Alternate hand use to reduce internal rotation of shoulder and risk of impingement
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury – e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration.
OTHER FACTORS	Above shoulder height work or work below hips/knees will be demanded depending on key storage location. Repetition and / or sustained postures will be determined by temporal factors: volume of keys returned or requested at any given time, large numbers of residents checking in/out en masse. These factors also lead to pressure to move faster – rushing or not stopping for posture breaks increases risk of injury.

JOB TASK ANALYSIS KNIFE WORK

PHYSICAL DEMAND	Medium
MOVEMENTS	• Sustained standing. Stooping may be required. • Cervical spine flexion with occasional rotations. • Upper arm in slight flexion and abduction. • Wrist in neutral, muscles stabilising. Forearm and hand muscles active to grip the knife – finger flexion. • Small range Elbow movement whilst in flexion.
SUSTAINED RISK FACTORS	• Standing • Cervical flexion • Shoulder in slight abduction and flexion. • Wrist in neutral – stabilised by forearm muscles. • Finger flexion to grip knife
REPETITIVE RISK FACTORS	• Cervical rotation • Small range elbow flexion and extension
RISK INJURY AREAS	• Shoulder strain cumulative injury with poor posture and/or moderate to high force demanded. • Elbow strain and strain or cumulative injury. • Wrist cumulative degeneration. • Lower Back – with long periods spent standing on hard surface, especially if poor posture is maintained, i.e. stooping to bench • Hip and Knee joints if they're positioned in full extension or ligaments are used to create passive stability when standing for long periods of time.
MODIFICATIONS	• Provide utensils and knives with ergonomic handles designed for comfort and efficient use of hand and forearm muscles in gripping. • Regular sharpening of knives – if they become blunt it requires much more effort from the upper limb and shoulder. • Workstation height that is correct for task will alter force and postural requirements. A table at elbow height and increased gradient of the work surface have positive effects. Where practical, consider workbenches of different heights. • Where possible, use chopping/slicing machines for vegetables to reduce manual chopping. Order pre-chopped vegetables.
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury – e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration.
OTHER FACTORS	Muscular exertions and movements are impacted by direction of cutting motions, grip technique and posture. Motor patterns and movements vary with experience and symptoms of pain. The number of cuts made, time per cut, cycle time, grip force, and cutting moment were all impacted by the type of food being processed. Exertions have also been noted to be variable and dependent on the task.

JOB TASK ANALYSIS LOAD & OPERATE COLD MEAT SLICER

PHYSICAL DEMAND	Light
MOVEMENTS	- Bilateral lower limb coordination to stand, walk and turn. - Hip and knee flexion and extension. Ankle dorsiflexion and plantar flexion. - Cervical flexion, extension, and rotation - Unilateral shoulder flexion, abduction, combined with varied degree of internal rotation. - Unilateral and bilateral elbow flexion and extension forearm pronation and supination, at times under load. - Flexion and extension of thumbs, wrist and fingers as required to grip items. At times under load e.g. carrying - Sustained standing, some side flexion and rotation of trunk/spine.
SUSTAINED RISK FACTORS	- Standing - Cervical flexion - Trunk rotation - Shoulder flexion, abduction, internal rotation
REPETITIVE RISK FACTORS	- Frequent cervical rotation and neck, back side flexion - Constant shoulder flexion, combined with abduction and rotation - Constant elbow flexion and extension. - Frequent forearm supination and pronation. - Constant neutral wrist combined with finger and thumb flexion and adduction. - Lower limb movement and muscle activation: - Hip and knee flexion and extension. - Ankle plantar and dorsiflexion.
RISK INJURY AREAS	- Back, shoulders, wrists, elbows and shoulder strains if maintain poor posture when performing standing upper limb activities. - Spine if fail to use legs (i.e. bend at hips, knees and ankles) to reach lower items. - Back muscles and spine structures if perform any part of task with flexed spine rather than maintaining neutral spine - Knees and backs if feet facing different direction to trunk. Joints and muscles are susceptible to injury in situations of twisting. - Neck due to sustained flexion whilst using upper limb muscles - elongation of spinal muscles leads to poor blood flow and increased risk of strain, sprain and cramp. - Shoulders and wrists if poor technique/posture - Shoulder injury if uncontrolled twisting or repeated cross centreline reaching. Both of these lead to increased risk of impingement.
MODIFICATIONS	- Slicer should be stored on height adjustable bench so that it can be adjusted to suit staff member's height and reduce posture related disorders. - Regular re-set stretches and postural exercises - Maintain neutral spine at all times - Keep body as close to task as possible, lean hips onto bench or stand in step stance- to reduce demands on postural muscles. - Stand with joints in slight flexion. - Lift items using lower limb muscles more than upper and spinal musculature. - When transporting items anywhere use mechanical aids/equipment e.g. trolley, or use two handed carry and move feet to face direction of travel so that no injurious twisting of knees and spinal structures occurs. - Use leg joints evenly and adequately to lower body height and visually locate items rather than bending forwards or stooping.
ENVIRONMENTAL FACTORS	Room layout, temperature, and furniture/equipment placement will alter position and range of joint movement demanded. If there is less space, movement will be more awkward, and joints will be placed at greater risk of strain. Effects of temperature can increase likelihood of injury – heat leading to dehydration and reduced health of body tissue, cold can lead to poor circulation to body tissue and reduced flexibility.
OTHER FACTORS	Temporal factors will alter how staff move when performing the task. Pressure to move faster can lead to rushing and increased risk of injury. Staff individual physical features will also impact risk. Fitter, stronger staff will be less affected by force required – as muscles will not fatigue as quickly. Height of staff will alter what range of movement is required to perform task with correct posture.

JOB TASK ANALYSIS **LOAD / UNLOAD / COLLECT LINEN** INCLUDES LINEN TROLLEYS, TUBS, BAGS

PHYSICAL DEMAND	Medium
MOVEMENTS	• Hip flexion and extension. • Knee flexion and extension. • Ankle dorsiflexion and plantar flexion. • Shoulder flexion and extension with varied amount of abduction. • Elbow flexion and extension. • Forearm pronation and supination. • Wrist extension, radial and ulnar deviation. • Finger and thumb flexion and extension. • Gripping • Sustained neck flexion. • Forward bending, squatting and crouching with and without load • Abdominal muscle and spinal muscle activation for stability.
SUSTAINED RISK FACTORS	• Standing posture with neck flexion to focus vision at task being completed. • Elbows held in flexed position.
REPETITIVE RISK FACTORS	• Constant shoulder flexion, extension, adduction and abduction. • Constant elbow flexion and extension. • Constant forearm pronation and supination. • Constant wrist extension and flexion. • Frequent knee and hip flexion and extension with and without load walking, forward bending, squatting, crouching, stooping & lunging –Frequent ankle dorsiflexion and plantar flexion.
RISK INJURY AREAS	• Neck due to sustained flexion combined with upper limb muscle activation. • Shoulder injury if uncontrolled twisting or repeated cross centreline reaching. Both of these lead to increased risk of impingement. • Back muscles and spine structures - if perform any part of task with flexed spine rather than neutral spine. • Spine and back muscles - if fail to bend at hips, knees and ankles to lower body to pick up linen item. • Cumulative injury at wrists forearms and hands if inefficient grip is used.
MODIFICATIONS	• Regular posture re-set stretches and exercises • Use lower limb joints to position body close to the task and so that neutral spine can be maintained at all times. Includes reaching into tubs, bags or trolleys – consider use of assistive devices or efficient stock management systems to avoid over-reaching. • Ensure workstation and linen storage set up allows efficient handling; frequently used stock/linen should be kept between hip and shoulder height. • Maintain 'thumbs up' working position of hand to reduce internal rotation of shoulder and risk of impingement (as when arms are rotated in so that thumbs point down). • Lift, lower, and load items using lower limb muscles more than upper and spinal musculature to reach down or away from body. • If transporting bag or stack of linen, use two handed carry and move feet to face direction of travel to avoid injurious twisting of knees and spine. • Upper arms should be kept at side where possible to keep load closer and this reduces reaching and torque on spine and shoulders • Correctly fitting gloves – poorly fitting gloves result in greater muscle use to grip linen bags and muscles fatigue faster. • Use power grip (whole hand) rather than pinch grips (fingers only) when handling, lifting or carrying.
ENVIRONMENTAL FACTORS	Temperature may play a role in determining susceptibility to injury - cold leads to reduced blood circulation to the peripheries which reduces flexibility of tissue and heat leads to dehydration and reduced tissue health, so both increase likelihood of injury. Space and organisation of the environment also alters the risk of injury occurring – if there is more crowding and poor organisation then more reaching or physical activity is required to access the items required, this increases likelihood of strain injury.
OTHER FACTORS	Temporal factors will alter how staff move when performing the task. When there is pressure to complete a task quickly then rushing will occur, meaning less correct movement, and greater likelihood of a misjudged activity and injury. Type of linen being moved will alter forces required – e.g. wet, soiled, amount of linen. Finally the number of staff sharing the job will change the likelihood of injury – more staff means less chance of fatigue.

JOB TASK ANALYSIS LOAD / UNLOAD COLD WELLS

PHYSICAL DEMAND	Medium
MOVEMENTS	- Hip and knee flexion and extension. Ankle dorsiflexion and plantar flexion. Use of leg muscles, abdominals and gluteals to brace while stand, semi-squat, and lift dioxies in/out. - Cervical flexion, and rotation - Shoulder flexion bilateral or unilateral – sustained. Slight shoulder abduction/ adduction combined with varied degree of rotation – under load. - Unilateral/bilateral wrist flexion, extension, radial and ulnar deviation – under load. - Sustained elbow flexion and supination, extension – under load. - Palm open grasp – slight finger flexion plus adduction so palm and fingers used to grasp item – variable weights. - Stooping, forward bending, semi-squat
SUSTAINED RISK FACTORS	- Cervical flexion - Standing
REPETITIVE RISK FACTORS	- Constant shoulder flexion with varied rotation and abduction required. - Constant elbow flexion, extension and supination. - Constant finger and thumb flexion. - Frequent hip and knee flexion and extension to move body closer and to appropriate height.
RISK INJURY AREAS	- Back, shoulders, wrists, elbows and shoulder strains if poor posture when performing standing and reaching activities. Awkward postures to manoeuvre around sneeze guard. - Knees and backs if feet facing wrong way when placing dixie. Joints and muscles are susceptible to injury in situations of twisting. - Shoulder cumulative injury due to repeated tasks requiring use of force whilst positioned in various degrees of flexion and abduction, protracted in relation to spine. - Shoulder injury if uncontrolled twisting or repeated cross centreline reaching. Both of these lead to increased risk of impingement. - Hands, wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm take the entire load – leading to fatigue and strain or sprain. - Pinch points.
MODIFICATIONS	- Minimise arm movement preferable by using the legs to move the body to an appropriate height to handle the dioxies. Lift items using lower limb muscles more than upper and spinal musculature. - Always load cold wells with side panels down or from the side with no side runner so reduces reaching and torque on spine and shoulders - Regular re-set stretches and exercises - Maintain neutral spine at all times. - Keep body as close to task as possible, lean hips onto bench to reduce demands on postural muscles. - Keep joints in slight flexion when standing. - Move feet to face where placing dixie so that no injurious twisting of knees and spinal structures occurs. - Ensure trolley is packed according to agreed uniform manner and in correct order for loading cold well. Less time is required to locate and place them so there will be less temporal pressure.
ENVIRONMENTAL FACTORS	Room layout, temperature, and equipment type, height will alter position and range of joint movement demanded. Effects of temperature can increase likelihood of injury – heat leading to dehydration and reduced health of body tissue, cold can lead to poor circulation to body tissue and reduced flexibility. If there is little space available (such as during crowded, busy service times), then movement will be more awkward, and joints will be placed at greater risk of strain.
OTHER FACTORS	Weight of trays will alter grip force and arm strength require for initial lever and lift. Staff physical features such as height, strength and fitness will alter how forces impact on their bodies. Temporal factors will alter how the staff move when performing the task: pressure to move faster can lead to rushing and increasing risk of injury.

JOB TASK ANALYSIS LOAD / UNLOAD BAIN MARIES

PHYSICAL DEMAND	Medium
MOVEMENTS	- Moderate range of Hip and knee flexion and extension. Use of leg muscles, abdominals and gluteals to brace while stand, semi-squat, and lift trays of wet dishes in/out - Cervical flexion, combined with rotation. - Slight shoulder flexion bilateral with slight abduction and internal rotation – under load. - Bilateral wrist flexion, extension, radial and ulnar deviation – under load. - Elbow flexion and extension concentric and eccentric; forearm pronation and supination – under load. - Flexion and extension of thumbs and fingers to grasp item – variable weights. - Stooping, forward bending, semi-squat
SUSTAINED RISK FACTORS	- Cervical flexion - Standing
REPETITIVE RISK FACTORS	- Constant shoulder flexion with varied rotation and abduction required. - Constant elbow flexion, extension and supination. - Constant finger and thumb flexion. - Frequent hip and knee flexion and extension to move body closer and to appropriate height.
RISK INJURY AREAS	- Back, shoulders, wrists, elbows and shoulder strains if maintain poor posture when performing standing and reaching activities. Awkward postures to manoeuvre around sneeze guard. - Back muscles and spine structures if fail to use legs (i.e. bend at hips, knees and ankles) to lower body and reach, rather than maintaining neutral spine. - Knees and backs if feet facing different way to upper body – resulting in twisting. - Neck due to sustained flexion, elongation of spinal muscles leads to poor blood flow and increased risk of injury. Neck strain, sprain and muscle cramp. - Shoulder cumulative injury due to repeated tasks requiring use of force whilst positioned in various degrees of flexion and abduction, protracted in relation to spine. - Shoulder injury if uncontrolled twisting or repeated cross centreline reaching. Both of these lead to increased risk of impingement. - Hands, wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm take the entire load – leading to fatigue and strain or sprain. - Risk of burns.
MODIFICATIONS	- Regular re-set stretches and exercises. - Minimise arm movement preferable by using the legs to move the body to an appropriate height to handle the dioxies. Lift items using lower limb muscles more than upper and spinal musculature. - Maintain 'thumbs up' working position of hand to reduce internal rotation of shoulder, optimise efficiency and strength of arm movements, and therefore risk of impingement - Use lower limb joints (hip, knee and ankle) to position body so that neutral spine can be maintained. - Keep body as close to task as possible, lean hips onto bench– to reduce demands on postural muscles. - Move feet to face where placing tray so that no injurious twisting of knees and spinal structures occurs. - Stand with joints in slight flexion. - Ensure trolley is packed according to agreed uniform manner and in correct order for loading Bain Marie. Less time is required to locate and place them so there will be less temporal pressure
ENVIRONMENTAL FACTORS	Room layout, temperature, and equipment type, height will alter position and range of joint movement demanded. Effects of temperature can increase likelihood of injury – heat leading to dehydration and reduced health of body tissue, cold can lead to poor circulation to body tissue and reduced flexibility. If there is little space available (such as during crowded, busy service times), then movement will be more awkward, and joints will be placed at greater risk of strain.
OTHER FACTORS	Weight of trays will alter grip force and arm strength require for initial lever and lift. Staff physical features such as height, strength and fitness will alter how forces impact on their bodies. Temporal factors will alter how staff move when performing the task: when there is pressure to move faster this can lead to rushing and increased risk of injury.

JOB TASK ANALYSIS LOAD/UNLOAD PALLETS/STOCK

PHYSICAL DEMAND	Heavy
MOVEMENTS	• Bilateral coordination of lower limbs to get close to item. • Hip and knee flexion and extension of varying degrees plus ankle plantar and dorsiflexion under load • Forward bending, stooping, squatting, and lunging to lift, carry and lower. • If unable to use lower limbs to get closer to item, use of leg and arm movement, to slide items closer to trunk. • Activation of spinal stabilising and abdominal muscles. • Bilateral movement of upper limbs to manipulate cutting tool, remove plastic, and grasp item – shoulder flexion, extension, and possibly abduction. • Palm open grasp – slight finger flexion plus adduction so palm and fingers used to grasp item. • Sustained elbow flexion and supination.
SUSTAINED RISK FACTORS	• Spinal and abdominal muscle activation for stability.
REPETITIVE RISK FACTORS	• Frequent cervical flexion, extension and rotation. • Constant shoulder flexion, and extension, abduction, and adduction, combined with varying degrees of rotation • Constant elbow flexion and extension. • Frequent forearm supination and pronation. • Frequent wrist flexion. • Constant finger and thumb abduction, flexion and adduction to grasp • Frequent hip and knee flexion and extension, ankle plantar and dorsiflexion under load.
RISK INJURY AREAS	• Sprain or strain of neck musculature and joints due to sustained muscle contraction linked with upper limb use and observation of hand movements. • Shoulder cumulative injury due to repeated tasks requiring use of force whilst positioned in varying degrees of flexion and abduction, protracted in relation to spine. • Back and shoulder strains - if using incorrect procedure such as standing still and twisting therefore creating torsion at the joint and increasing likelihood of damage. • Back - if forward bending, or stooping instead of safe squat lift • Shoulders and wrists - if poor procedure using upper body strength to perform movements rather than body weight and leg strength. • Forearm, hand and wrist structure strain - if use inefficient grip on item.
MODIFICATIONS	• Pre-start warm up • Regular re-set stretches performed to reduce muscle tension, and pressure placed on joints – therefore reducing likelihood of cumulative injury. • Move feet and use legs to position body so that trunk/torso is facing work area or item and twisting is avoided. • Use of safety step in event that stock is higher than shoulder height. • Use legs to lift, and bodyweight to slide item. • Ensure clear communication with colleagues to work together efficiently. • Palm open grip is more effective as it allows use of hand and finger strength – avoid using only fingers to grip item. • Clear all rubbish from area regularly during process of unloading so that the working environment remains clear. • Use mechanical aids as much as possible
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury creating varied conditions for staff to work in – e.g. working in cold areas such as freezer or cool room can lead to increased joint stiffness whereas heat may lead to higher level of dehydration.
OTHER FACTORS	Length of sustained posture and overall level of force and movement repetition will vary based on the way a pallet has been packed (if heavy items are high or low). It will also vary depending on type of item being unloaded. Daily repetitions of an action will be determined both by number of items to be offloaded and the number of staff sharing the job will affect likelihood of injury – more staff decreases risk of fatigue. Temporal factors will alter how staff move when performing the task. Pressure to complete tasks quickly will result in rushing, less correct movement, and greater likelihood of a misjudged activity and injury.

JOB TASK ANALYSIS LOAD / UNLOAD PIE FREEZERS INCL. ICECREAM FREEZER

PHYSICAL DEMAND	Medium
MOVEMENTS	- Hip and knee flexion and extension. Ankle dorsiflexion and plantar flexion. Use of leg muscles and gluteals to stand and lift item. - Slight shoulder flexion sustained and shoulder abduction/ adduction – under load - Elbow flexion and extension with forearm pronation and supination controlled – under load - Wrist in neutral, muscles stabilising – under load - Palm open grasp – slight finger flexion plus adduction so palm and fingers used to grasp item – variable weights - Sustained standing - Occasional stooping, forward bending, crouching, squatting, reaching above shoulders, below hips – variable loads - Bilateral lower limb coordination to stand, walk and turn.
SUSTAINED RISK FACTORS	- Sustained light gripping – finger and thumb flexion and adduction - Standing
REPETITIVE RISK FACTORS	- Frequent shoulder flexion, extension, adduction and abduction. - Constant elbow flexion and extension. - Constant forearm pronation and supination. - Constant wrist extension and flexion - Frequent bending, walking, squatting and lunging – spinal flexion, rotation, hip flexion and extension, knee flexion and extension. - Frequent ankle dorsiflexion and plantar flexion
RISK INJURY AREAS	- Wrist, elbow, shoulder and spine structures if picking up or placing stock into the pie freezers with incorrect posture (i.e. not bending at hips, knees and ankles to reach down). Most freezers are 'chest freezer' variety: lower than hip height and as low as knee height when stocking from empty. - Shoulder cumulative injury with repeated tasks under load whilst protracted in relation to spine, e.g. over-reaching in any direction, or reaching above shoulder height for upright commercial freezers - Knees and backs if twisting - Neck due to sustained flexion, elongation of spinal muscles leads to poor blood flow and increased risk of injury. - Hands, wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm take the entire load – leading to fatigue and strain or sprain. - Shoulder injury if uncontrolled twisting or repeated cross-centreline reaching. Both of these lead to increased risk of impingement.
MODIFICATIONS	- Avoid carrying by using trolley - Always lift, hold, carry stock with both hands. - Use a light but controlling grip - Minimise arm movement by using the legs to move the body to an appropriate height to handle the boxes, e.g. squat. Safety step where appropriate. - Remove freezers baskets and stack on the bench, then replace the basket in the freezer rather than loading stock straight into the freezer, minimising the temptation to bend forward. Seek assistance, beware pinch points. - Regular posture re-set stretches and exercises - Maintain neutral spine at all times. - Keep body as close to task as possible, lean hips onto fridge and adopt step stance to reduce pressure on postural muscles. - Stand with joints in slight flexion.
ENVIRONMENTAL FACTORS	Temperature may play a role in determining susceptibility to injury - cold leads to reduced blood circulation to the peripheries which reduces flexibility of tissue, and increase likelihood of injury.
OTHER FACTORS	Temporal factors will alter how staff move when performing the task. When there is pressure to complete a task quickly then rushing may occur, meaning less correct movement, and greater likelihood of a misjudged activity and injury. Finally the number of staff sharing the job will change the likelihood of injury – more staff means less chance of fatigue.

JOB TASK ANALYSIS

LOAD / USE / UNLOAD INDUSTRIAL DISHWASHER INCLUDING POTWASH, POTSOAK

PHYSICAL DEMAND

Medium

MOVEMENTS

- Small to full ROM squatting, crouching, lunging motion with and without load.
- Moderate to full range of hip flexion, extension, knee flexion and extension. Ankle dorsiflexion and plantar flexion.
- Cervical flexion, extension, and rotation
- Shoulder flexion bilateral abduction/ adduction combined with rotation with and without load
- Bilateral wrist flexion, extension, radial and ulnar deviation, with and without load
- Elbow flexion and extension, with and without load
- Forearm pronation and supination
- Flexion and extension of thumbs and fingers, with and without load..
- Moderate abdominal and spinal muscle contraction for stability
- Sustained standing
- Forward bending, stooping

SUSTAINED RISK FACTORS

- Standing posture with neck flexion to focus vision at tray and dishwasher level (approximately hip to shoulder height)
- Sustained gripping
- Abdominal and spinal muscle contraction for stability.

REPETITIVE RISK FACTORS

- Occasional finger flexion and extension plus wrist movement for gripping. Combined with finger adduction with and without load
- Constant elbow full ROM, forearm pronation and supination, with and without load.
- Frequent weight shift from foot to foot, hip flexion and extension
- Occasional Ankle dorsiflexion and plantar flexion.
- Frequent Knee flexion and extension plus lower limb muscle activation to lift and lower

RISK INJURY AREAS

- Back, shoulders, wrists, elbows and shoulder strains if maintain poor posture when performing standing and reaching activities.
- Spine if fail to use legs (i.e. bend at hips, knees and ankles) to lower body and reach lower items.
- Back muscles and spine structures if perform any part of task with flexed spine rather than maintaining neutral spine
- Knees and backs if feet facing different way to upper limb activity. (twisting)
- Neck due to sustained flexion whilst upper limbs working leads to poor blood flow and increased risk of strain, sprain and muscle.
- Shoulder cumulative injury due to repeated tasks requiring use of force whilst positioned in various degrees of flexion and abduction, protracted in relation to spine.
- Shoulders and wrists if poor technique – using upper body strength to perform movements rather than body weight and leg strength.
- Hands, wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm take the load – leading to fatigue and strain or sprain.
- Shoulder injury if uncontrolled twisting or repeated cross centreline reaching. Both of these lead to increased risk of impingement.

MODIFICATIONS

- Kitchen should be organised in a way that staff aren't forced to twist or reach to move from sink to dish washer.
- Lift items and drive force creation with lower limb muscles at the same time as upper limb muscles to reduce load from upper limb.
- Regular re-set stretches and postural exercises
- Position close to task
- Maintain neutral spine at all times. Use lower limb joints (hip, knee and ankle) to position body so that neutral spine can be maintained.

ENVIRONMENTAL FACTORS

Length of sustained posture, posture required, and overall level of force and movement repetition will vary based on the trough type and size, how far it is from the dishwasher, the type of dishwasher and how it needs to be loaded.. Weather and temperature may play a role in determining susceptibility to injury creating varied conditions for cleaners to work in – e.g. cold can lead to reduced circulation so increased joint stiffness, whereas heat may lead to higher level of dehydration and poor tissue health.

OTHER FACTORS

Daily repetitions of an action will be determined both by job rotation amongst staff members, number of residents and plates used. Behavioural factors, such as rushing, can alter likelihood of injury. Finally physical factors such as height, strength, mobility and fitness will alter likelihood of an incident occurring. Refer to Scrub Pots & Pans task analysis also.

EQUIPMENT	FORCE REQUIRED	
	PUSH	PULL
Industrial dishwasher	8kg open overhead	(minimal to close)
Potwash machine	10kg open overhead	13kg from overhead

JOB TASK ANALYSIS LOAD FOOD & BEVERAGE DISPENSERS

PHYSICAL DEMAND	Light - Medium
MOVEMENTS	• Bilateral lower limb coordination to stand, squat, walk and turn. • Hip flexion, extension, knee flexion and extension. Ankle dorsiflexion and plantar flexion. • Shoulder flexion bilateral with abduction, combined with varied degree of rotation • Bilateral wrist flexion, extension, radial and ulnar deviation. • Upper limb and cervical spine movements and coinciding musculature use. • Elbow flexion and extension and forearm pronation and supination. • Flexion of thumbs and fingers • Arm and leg movements under variable loads, e.g. for lifting and carrying stock • Finger manipulation. • Standing, stooping, forward bending, crouching, squatting
SUSTAINED RISK FACTORS	• Spinal and abdominal muscle activation for stability. • Standing
REPETITIVE RISK FACTORS	• Frequent cervical flexion, and rotation • Constant shoulder flexion, and extension combined with abduction and rotation • Constant elbow flexion and extension. • Frequent forearm supination and pronation. • Constant wrist, finger and thumb flexion/extension • Hip and knee flexion and extension. • Ankle plantar and dorsiflexion.
RISK INJURY AREAS	• Spine if fail to use legs (i.e. bend at hips, knees and ankles) to lower body and reach lower items • Back muscles and spine structures if perform any part of task with flexed spine rather than maintaining neutral spine • Knees and backs if feet facing wrong way and twisted when perform task • Neck due to sustained flexion, elongation of spinal muscles leads to poor blood flow and increased risk of injury. Neck strain, sprain and muscle cramp. • Shoulder cumulative injury due to repeated tasks requiring use of force whilst positioned in flexion and abduction, and protraction. • Hands, wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm take the load – leading to fatigue and strain or sprain. • Shoulder injury if uncontrolled twisting or repeated cross centreline reaching. Both of these lead to increased risk of impingement.
MODIFICATIONS	• Regular re-set stretches and postural exercises • Use aids/equipment to minimise manual handling, e.g. trolleys. Decant stock to reduce load/weight. • Plan and prepare stock storage and rotation for ease of refilling F&B stations/dispensers. • Keep body close to the task. Task performed below shoulder height. Use of safety step in event that dispenser is higher than shoulder height. Use legs to lower body when reaching down. • Move dispenser closer to front of bench if possible – this allows closer movement so reduces reaching and torque on spine and shoulders • Ambidextrous use of upper limbs maintaining neutral joint postures to reduce internal rotation of shoulder and risk of impingement • Maintain neutral spine at all times. Stand with knees in slight flexion. Avoid twisting - step with feet to change direction/turn.
ENVIRONMENTAL FACTORS	Room layout and furniture will alter position and range of joint movement demanded. If there is crowding then it becomes more difficult for staff to access the containers or storage – meaning greater twisting or carrying. Temperature will alter susceptibility to injury – if too hot or cold then the body's tissues are more susceptible to injury.
OTHER FACTORS	Physical demand depends on weight of stock - napkins, salt/pepper compared with juice cartons, drink dispensers. Temporal factors will alter how staff move when performing the task. Pressure to move faster can lead to rushing and increasing risk of injury. Staff individual physical features will also impact risk. Fitter, stronger staff will be less affected by force required. Height of staff will alter what range of movement is required to perform task with correct posture.

JOB TASK ANALYSIS LOAD FROZEN MEATS INTO 20L/40L CONTAINER

PHYSICAL DEMAND	Heavy
MOVEMENTS	- Moderate range of hip flexion, extension, knee flexion and extension, ankle dorsiflexion and plantar flexion - under significant load - Slight shoulder flexion bilateral. Shoulder abduction/ adduction combined with rotation of shoulders - Wrist flexion, extension, radial and ulnar deviation. - Upper limb and cervical spine joint movement and musculature use - under significant load. - Elbow flexion and extension with varied forearm pronation and supination. - Moderate abdominal and spinal muscle contraction for stability. - Palm open grasp – slight finger flexion plus adduction so palm and fingers used to grasp item. - Standing, stooping, forward bending, squatting
SUSTAINED RISK FACTORS	- Moderate abdominal and spinal muscle contraction for stability - Standing
REPETITIVE RISK FACTORS	- Constant hip and knee flexion plus extension - under load. - Constant bilateral shoulder flexion, extension, rotation and abduction. - Constant Elbow flexion - lifting and lowering - Frequent forearm pronation or supination - Constant grasping of box – finger flexion and extension.
RISK INJURY AREAS	- Back muscles and spine structures if perform any part of task with flexed spine - Knees and backs if feet facing different way to trunk when using any amount of force. Joints and muscles are susceptible to injury in situations of twisting, particularly under load and / or in addition to bending. - Neck due to sustained flexion, elongation of spinal muscles leads to poor blood flow and increased risk of injury. Neck strain, sprain and muscle cramp. - Shoulder cumulative injury due to repeated tasks requiring use of force whilst positioned in various degrees of flexion and abduction, protracted in relation to spine. - Neck, shoulders, hands, wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm take the entire load – leading to fatigue and strain or sprain.
MODIFICATIONS	- Pre-start warm up and regular re-set stretches and postural exercises. - Keep body as close to task as possible. Set up equipment (pallet jack, tubs, tub truck/dolly) and storage area (shelves, boxes of stock/frozen meat) close by and at waist height to minimise bending when lifting - Maintain neutral spine at all times. Use lower limb joints (hip, knee and ankle) to position body and for lifting to reduce load on upper body. . - Keep joints in slight flexion when standing. - Activate core musculature to stabilise at spine and reduce risk of twisting sprain/strain. - Correctly fitting gloves – poorly fitting gloves result in greater muscle use to grip items and muscles fatiguing faster.
ENVIRONMENTAL FACTORS	Temperature may play a role in determining susceptibility to injury - cold leads to reduced blood circulation to the peripheries which reduces flexibility of tissue, and stiffness, and increase likelihood of injury. Use PPE appropriately. Space and organisation of the environment also alters the risk of injury occurring – if there is more crowding and poor organisation then more reaching or physical activity is required to access the items required, this increases likelihood of strain injury.
OTHER FACTORS	Temporal factors will alter how staff move when performing the task. When there is pressure to complete a task quickly then rushing may occur, and greater likelihood of a misjudged activity and injury. Time spent in the cold environment – longer spent means colder internal environment and more likelihood of injury. Finally the number of staff sharing the job will change the likelihood of injury - task rotation reduces risk of fatigue.

JOB TASK ANALYSIS LOAD / UNLOAD INDUSTRIAL MIXER

PHYSICAL DEMAND	Medium
MOVEMENTS	- Sustained standing - Hip flexion, extension, knee flexion and extension, ankle dorsiflexion and plantar flexion – at times under load - Cervical flexion, extension, and rotation - Shoulder flexion bilaterally, abduction/ adduction, Elbow flexion with forearm supination, Flexion and extension of thumbs and fingers as required to grasp item – under load - Forward bending, stooping, squatting – at times under load
SUSTAINED RISK FACTORS	Standing
REPETITIVE RISK FACTORS	- Frequent cervical flexion, and rotation - Constant shoulder flexion, and extension combined with abduction and rotation - Constant elbow flexion and extension. - Frequent forearm supination and pronation. - Constant neutral wrist combined with finger and thumb flexion and adduction - Repetitive bending (depending on equipment/environment set up)
RISK INJURY AREAS	- Back, shoulders, wrists, elbows and shoulder strains. - Back muscles and spine structures if fail to use legs (i.e. bend at hips, knees and ankles) to reach lower down. - Knees and spine if twisting. - Shoulder injury if use of force whilst positioned in abduction, and protracted in relation to spine. - Shoulders and wrists if poor technique – using upper body strength to perform movements rather than body weight and leg strength. - Hands, wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm take the load – leading to fatigue and strain or sprain.
MODIFICATIONS	- Mixer should be placed on separate bench so that it is at average waist height, not on the floor. - Task performed below shoulder height. Use of safety step in event that unable to perform task because of height of machine. - Ambidextrous use of upper limbs maintaining neutral posture of joints. - Maintain neutral spine at all times. - Use lower limb joints (hip, knee and ankle) to position body so that neutral spine can be maintained. Joints in slight flexion when standing. - Keep body as close to task as possible – to reduce demands on postural muscles. - Lift items using lower limb muscles more than upper and spinal musculature. - Consider use of utensils/equipment e.g. decanting jugs, donut mix dispenser to minimise repetitive movements of the hand e.g. dispensing dough onto trays. - Use power grip (whole hand) rather than pinch grips (fingers only). - Regular posture re-set stretches and exercises.
ENVIRONMENTAL FACTORS	Room layout- where mixer has been placed (floor or bench) will alter what movement and force is required to add ingredients. Temperature may play a role in determining susceptibility to injury – e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration.
OTHER FACTORS	Temporal factors will alter how staff move when performing the task: pressure to move faster can lead to rushing and increasing risk of injury. Weight of ingredients is something to consider too: if delivered in larger volumes then this will mean heavier items to manoeuvre. Staff individual physical features will also impact risk: fitter, stronger staff will be less affected by force required – as muscles will not fatigue as quickly. Height of staff will alter what range of movement is required to perform task with correct posture.

JOB TASK ANALYSIS LOAD PLATES

PHYSICAL DEMAND	Medium – Heavy
MOVEMENTS	- Squatting, crouching, lunging motion with and without load. - Moderate to full range of hip flexion, extension, knee flexion and extension with and without load - Ankle dorsiflexion and plantar flexion. - Cervical flexion, extension, and rotation - Shoulder flexion bilateral abduction/ adduction combined with rotation with and without load - Bilateral wrist flexion, extension, radial and ulnar deviation, with and without load - Elbow flexion and extension, with and without load - Forearm pronation and supination - Flexion and extension of thumbs and fingers, with and without load. - Moderate abdominal and spinal muscle contraction for stability - Sustained standing - Forward bending, stooping
SUSTAINED RISK FACTORS	- Standing posture with neck flexion to focus vision at tray and dishwasher level (approximately hip to shoulder height) - Sustained gripping - Abdominal and spinal muscle contraction for stability.
REPETITIVE RISK FACTORS	- Occasional finger flexion and extension plus wrist movement for gripping. Combined with finger adduction with and without load - Constant elbow full ROM, forearm pronation and supination, with and without load. - Frequent weight shift from foot to foot, hip flexion and extension - Occasional Ankle dorsiflexion and plantar flexion. - Frequent Knee flexion and extension plus lower limb muscle activation to lift and lower
RISK INJURY AREAS	- Back, shoulders, wrists, elbows and shoulder strains if maintain poor posture when performing standing and reaching activities. - Spine if fail to use legs (i.e. bend at hips, knees and ankles) to lower body and reach lower items. - Back muscles and spine structures if perform any part of task with flexed spine rather than maintaining neutral spine - Knees and backs if feet facing different way to upper limb activity. (twisting) - Neck due to sustained flexion whilst upper limbs working leads to poor blood flow and increased risk of strain, sprain and muscle. - Shoulder cumulative injury due to repeated tasks requiring use of force whilst positioned in various degrees of flexion and abduction, protracted in relation to spine. - Shoulders and wrists if poor technique – using upper body strength to perform movements rather than body weight and leg strength. - Hands, wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm take the load – leading to fatigue and strain or sprain. - Shoulder injury if uncontrolled twisting or repeated cross centreline reaching. Both of these lead to increased risk of impingement.
MODIFICATIONS	- Kitchen should be organised in a way that staff aren't forced to twist or reach to move from sink to dish washer. - Lift items and drive force creation with lower limb muscles at the same time as upper limb muscles to reduce load from upper limb. - Regular re-set stretches and postural exercises - Position close to task - Maintain neutral spine at all times. Use lower limb joints (hip, knee and ankle) to position body so that neutral spine can be maintained.
ENVIRONMENTAL FACTORS	Length of sustained posture, posture required, and overall level of force and movement repetition will vary based on where the plates will be loaded, how many plates need to be loaded and the ease of access. Weather and temperature may play a role in determining susceptibility to injury creating varied conditions for cleaners to work in – e.g. cold can lead to increased joint stiffness, whereas heat may lead to higher level of dehydration and poor tissue health.
OTHER FACTORS	Behavioural factors, such as rushing, can alter likelihood of injury. Finally physical factors such as height, strength, mobility and fitness will alter likelihood of an incident occurring.

JOB TASK ANALYSIS LOAD POTATO RUMBLER

PHYSICAL DEMAND	Medium
MOVEMENTS	- Sustained standing - Hip flexion, extension, knee flexion and extension, ankle dorsiflexion and plantar flexion - under load. - Cervical flexion, extension, and rotation. - Shoulder flexion bilateral. Slight abduction/ adduction. - Elbow flexion/extension with forearm supination. - Flexion and extension of thumbs and fingers as required to grasp item with moderate intensity. - Upper limb and cervical spine joint movement and musculature use - under load. - Moderate abdominal and spinal muscle contraction for stability.
SUSTAINED RISK FACTORS	Standing
REPETITIVE RISK FACTORS	- Frequent cervical flexion, and rotation - Constant shoulder flexion and extension combined with abduction and rotation - Constant elbow flexion and extension. - Frequent forearm supination and pronation. - Constant wrist flexion/extension combined with finger and thumb flexion and adduction - Hip and knee flexion and extension , ankle plantar and dorsiflexion - under load
RISK INJURY AREAS	- Spine if fail to use legs (i.e. bend at hips, knees and ankles) to Reach down, lift and lower potatoes. - Back muscles and spine structures if perform any part of task with flexed spine rather than maintaining neutral spine - Knees and backs if perform task while twisting - particularly when under load and / or with bending. - Shoulder injury if exerting force whilst positioned in abduction, and protracted in relation to spine. - Back, shoulders and wrists if poor technique – using upper body strength to perform movements rather than body weight and leg strength. - Hands, wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm take the load – leading to fatigue and strain or sprain.
MODIFICATIONS	- Regular re-set stretches and postural exercises. - Use aids/equipment to minimise manual handling e.g. trolley to transport bags of potatoes. See assistance to load/unload potatoes. - Order pre-peeled/sliced/chopped vegetables as required to minimise manual food preparation. - Keep body as close to task as possible. Task performed below shoulder height: use of safety step in event that unable to perform task because of height of staff or location of machine. - Use both hands, maintaining neutral position of joints as much as possible. - Maintain neutral spine at all times. Use lower limb joints (hip, knee and ankle) to position body. Lift items using lower limb muscles more than upper and spinal musculature. - Use power grip (whole hand) rather than pinch grips (fingers only).
ENVIRONMENTAL FACTORS	Room layout, bench height, temperature, and equipment availability and set up will alter postures and forces demanded.
OTHER FACTORS	Temporal factors will alter how staff move when performing the task. Pressure to move faster can lead to rushing and increased risk of injury. Staff individual physical features will also impact risk. Fitter, stronger staff will be less affected by force required – as muscles will not fatigue as quickly. Height of staff will alter what range of movement is required to perform task with correct posture.

JOB TASK ANALYSIS LOAD TRAY TROLLEY

PHYSICAL DEMAND	Medium
MOVEMENTS	• Bilateral lower limb coordination - stand, walk, crouch, squat and turn • Hip and knee flexion and extension. Ankle dorsiflexion and plantar flexion. • Cervical flexion, extension, and rotation. • Shoulder flexion bilaterally, abduction/ adduction – under load • Wrists in neutral, with slight ulnar deviation – under load • Flexion and extension of thumbs and fingers as required to grasp item – variable weights • Sustained elbow flexion and supination – under load • Forward bending, crouching, squatting, stooping – to reach from below knees to above shoulders – under load.
SUSTAINED RISK FACTORS	• Standing
REPETITIVE RISK FACTORS	• Frequent hip flexion, extension, knee flexion and extension. Ankle dorsiflexion and plantar flexion. • Constant shoulder flexion bilateral. Slight abduction/ adduction. • Constant bilateral Wrist flexion and ulnar deviation. • Constant flexion and extension of thumbs and fingers as required to grasp item with moderate intensity.
RISK INJURY AREAS	• Back, shoulders, wrists, elbows and shoulder strains if maintain poor posture when performing standing, bending and reaching activities under load. • Spine if fail to use legs (i.e. bend at hips, knees and ankles) to lower body and reach lower items. • Knees and back muscles and spine structures are susceptible to injury from twisting • Shoulder cumulative injury due to repeated tasks requiring use of force whilst positioned in various degrees of flexion and abduction, protracted in relation to spine, and under load. • Hands, wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm take the entire load – leading to fatigue and strain or sprain.
MODIFICATIONS	• Regular re-set stretches. Regular postural exercises • Trays/dixies placed between shoulder and hip height if reasonable to do so. • Minimise weight of tray contents – particularly wet dishes • Keep body as close to task as possible, step towards trolley as tray slides on - this allows closer movement so reduces reaching and torque on spine and shoulders • Maintain neutral spine at all times. • Use lower limbs to lower body if need to access tray on lower shelf. • Lift items using lower limb muscles more than upper and spinal musculature. • If transporting tray from anywhere: minimise distance carried (use trolley), use two handed carry and move feet to face direction of travel so that no injurious twisting of knees and spinal structures occurs.
ENVIRONMENTAL FACTORS	Room layout, temperature, and condition of tray trolley will alter position and range of joint movement demanded.
OTHER FACTORS	Temporal factors will alter how staff move when performing the task: pressure to move faster can lead to rushing and increased risk of injury. Staff individual physical features will also impact risk: fitter, stronger staff will be less affected by force required – as muscles will not fatigue as quickly. Height of staff will alter what range of movement is required to perform task with correct posture.

JOB TASK ANALYSIS LOWERING BRANCHES

PHYSICAL DEMAND	Heavy
MOVEMENTS	- Shoulder flexion, abduction and extension - Elbow flexion and extension. Forearm pronation/supination. - Cervical spine extension, flexion, and rotation - Grip – finger manipulation, flexion and extension with wrist flexion/extension, radial and ulnar deviation - Hip and knee flexion and extension of varying degrees
SUSTAINED RISK FACTORS	- Cervical flexion or extension to look at branch - Hand grip on rope - Standing
REPETITIVE RISK FACTORS	- Finger flexion and extension with wrist radial and ulnar deviation when releasing rope to lower branch - Shoulder flexion, abduction and extension, Elbow flexion and extension.
RISK INJURY AREAS	- Back muscles and spine structures if perform any part of task with flexed spine rather than maintaining neutral spine - Knees and back - if feet facing different way to trunk. Joints and muscles are susceptible to injury in situations of twisting - Neck, shoulders, elbows, and wrist joints when taking load of falling branch
MODIFICATIONS	- Pre-start warm up - Keep joints in slight flexion when standing. - Tie rope to stable object to prevent jerking of body when branch is initially cut and falls - Regular re-set stretches performed to reduce muscle tension and pressure placed on joints to reduce likelihood of injury
ENVIRONMENTAL FACTORS	Effects of temperature can increase likelihood of injury – heat leading to dehydration, cold can lead to poor circulation. Ground surface type will determine risk of trips and falls.
OTHER FACTORS	The size of the branch will determine overall level of force required. Falling sticks / leaves/ dust can inhibit view of task – appropriate PPE must be worn.



JOB TASK ANALYSIS LUGGAGE HANDLING

PHYSICAL DEMAND	Medium - Heavy
MOVEMENTS	- Moderate range of Hip flexion, extension, knee flexion and extension. Ankle dorsiflexion and plantar flexion. - Shoulder flexion bilateral or unilateral – sustained. Shoulder abduction/ adduction - Unilateral/bilateral Wrist flexion, extension, radial and ulnar deviation. - Elbow flexion and extension. Forearm pronation and supination. - Flexion and extension of thumbs and fingers as required to grasp item firmly. - Moderate abdominal and spinal muscle contraction for stability - Variable range of joint motion required under variable loads. Opening, closing luggage compartments and reaching luggage requires strength, flexibility.
SUSTAINED RISK FACTORS	Abdominal and spinal muscle activation for stabilisation.
REPETITIVE RISK FACTORS	- Frequent moderate range of hip flexion, extension and ankle range of movement - Constant shoulder flexion bilateral and shoulder abduction/ adduction - Constant wrist flexion, extension, ulnar deviation. - Forearm pronation and supination. - Flexion and extension of thumbs and fingers.
RISK INJURY AREAS	- Spine if fail to use legs (i.e. bend at hips, knees and ankles) to lower body and reach lower items. This increases risk of strain and sprain - Back muscles and spine structures if perform any part of task with flexed spine rather than maintaining neutral spine - Knees and backs if feet facing different way to trunk. Joints and muscles are susceptible to injury if twisted. - Shoulder cumulative injury due to repeated tasks requiring use of force whilst positioned in various degrees of flexion and abduction, protracted in relation to spine. - Shoulders and wrists if poor technique – using upper body strength to perform movements rather than body weight and leg strength. - Hands, wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm take the load – leading to fatigue and strain or sprain. - Shoulder injury if uncontrolled twisting or repeated cross centreline reaching. Both of these lead to increased risk of impingement.
MODIFICATIONS	- Pre-start warm up - Regular re-set stretches and postural exercises. - Use of safety step in event that the storage compartment/shelf is higher than shoulder height. - Move feet so able to get close load/task – this reduces reaching and torque on spine and shoulders - Avoid awkward postures where possible: use of upper limbs maintaining efficient, neutral postures to reduce internal rotation of shoulder and risk of impingement. Maintain neutral spine at all times. Use lower limb joints (hip, knee and ankle) to position body so that neutral spine can be maintained. - Activate core musculature to stabilise at spine and reduce risk of twisting sprain/strain. - Lift items using lower limb muscles more than upper and spinal musculature. - Perform lifts using both hands holding each item. Not with one item in each hand. - If transporting luggage use two handed carry and move feet to face where placing it to avoid injurious twisting of knees and spinal structures. - Correctly fitting gloves – poorly fitting gloves result in greater muscle requirement to grip item and muscles fatiguing faster.
ENVIRONMENTAL FACTORS	Effects of temperature can increase likelihood of injury – heat leading to dehydration and reduced health of body tissue, cold can lead to poor circulation to body tissue and reduced flexibility. Position of the luggage and ease of access to the luggage compartment/storage area will alter what joint range of movement is required and forces needed to complete the task.
OTHER FACTORS	Weight and amount of the luggage will alter how much force is required and energy is needed to complete the task. Physical capabilities of staff – cardiovascular fitness and strength – will alter how the forces affect them. Also temporal factors – if there is any rushing there is greater likelihood of mistakes being made and injuries occurring.

JOB TASK ANALYSIS MAIL / FREIGHT CHECK-IN

PHYSICAL DEMAND	Medium - Heavy
MOVEMENTS	• Cervical flexion, extension, and rotation. • Upper limb movement to reach, lift, carry. • Shoulder flexion, extension, abduction, rotation. • Elbow flexion, extension: concentric and eccentric control required. • Forearm pronation and supination. • Flexion and extension of thumbs and fingers as required to grasp item with moderate intensity. • Moderate abdominal and spinal muscle contraction for stability • Bilateral lower limb coordination to squat, lunge, stand, walk and turn. • Hip and knee flexion and extension • Ankle dorsiflexion and plantar flexion
SUSTAINED RISK FACTORS	• Cervical muscle activity – to control flexion and rotation.
REPETITIVE RISK FACTORS	• Constant fine motor use of hands – finger flexion and extension • Frequent hand and forearm muscles, elbow flexion and extension, shoulder flexion and extension to collect and carry item. • Frequent flexion and extension of hips, knees and ankles.
RISK INJURY AREAS	• Cervical spine joints and musculature • Upper limb muscles • Shoulder joints • Back, shoulders, wrists, elbows and shoulder strains if maintain poor posture when performing standing and reaching activities. • Back if fail to bend at hips, knees and ankles to lower body and reach lower items. • Back muscles and spine structures if perform any part of task with flexed spine rather than maintaining neutral spine – particularly with lifting and carrying. • Knees and back if feet facing wrong way when reaching. Joints and muscles are susceptible to injury in situations of twisting.
MODIFICATIONS	• Pre-start warm up • Regular re-set stretches • A palm grip is one of the most important elements of correct lifting. Keep fingers and hands extended around the object to be lifted, using full palm, therefore able to use the strength of the entire hand. • Avoid twisting during lifting; turning feet pointing in the direction of travel. • Push, rather than pull, all trolleys and other equipment used to transport the items • Ambidextrous use of upper limbs with neutral postures of shoulder, wrist and hand to reduce internal rotation of shoulder and risk of impingement
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration.
OTHER FACTORS	Length of sustained posture and overall level of force and movement repetition will vary based on the item type, weight, shape, quantity, and size.

JOB TASK ANALYSIS MAINTENANCE – CHANGE DOOR LOCKS

PHYSICAL DEMAND	Medium
MOVEMENTS	• Sitting for driving buggy (hip flexion, knee flexion, ankle dorsi flexion). • Bilateral lower limb coordination for standing and walking and crouching (including hip flexion and extension, knee flexion and extension, ankle dorsi and plantar flexion). • Upper body movements for lifting and carrying including shoulder flexion, forearm flexion, finger flexion (for gripping). • Upper body movements for tool use, including shoulder flexion and extension, forearm flexion and extension, forearm pronation and supination, finger flexion and extension, wrist rotation. • Forearm activation for placing components into door frame (including gripping, forearm flexion, extension, supination, rotation, shoulder abduction, flexion and rotation). • Spinal movements including lumbar and thoracic flexion, thoracic and cervical flexion and extension, cervical rotation.
SUSTAINED RISK FACTORS	• Sustained shoulder flexion and elbow flexion when working with tools and door lock. • Sustained gripping and wrist positioning to grasp hand tools including screwdrivers and electric drill. • Sustained crouch or stoop to position in front of door lock.
REPETITIVE RISK FACTORS	• Repetitive wrist flexion, extension and rotation to position lock into place. • Repetitive forearm supination and pronation whilst using hand tools. • Repetitive crouching and potentially forward spinal flexion when positioning in front of door lock.
RISK INJURY AREAS	• Lower back injury from carrying equipment or reaching into buggy unit or stooping/forward bending. • Forearm, elbow, wrist or shoulder strain or sprain from manipulating lock or hand tools. • Slip, trip or fall injuries if area is not kept tidy.
MODIFICATIONS	• Carry items bilaterally to balance load on body. Make several trips if necessary. Seek assistance. • Ensure that work area is kept tidy to reduce risk of slip, trip or fall hazards. • Ensure crouching is stable in nature and position is as close to the door lock as practicable to reduce forward bending/stooping. • Ensure gripping is comfortable to reduce tension through hands, wrist and forearms.
ENVIRONMENTAL FACTORS	Heat and cold associated with outdoor temperatures increasing risk for soft tissue injury.
OTHER FACTORS	Individual factors including person's lifting capabilities, strength, build and fitness level. Extent of onsite training, induction and knowledge around job processes and equipment. Ensure electrical equipment or power tools are used safely to reduce other risks.

JOB TASK ANALYSIS MAINTENANCE – RETICULATION

PHYSICAL DEMAND	Medium - Heavy
MOVEMENTS	- Sitting for driving buggy (hip flexion, knee flexion, ankle dorsi flexion). - Bilateral lower limb coordination for standing, walking and crouching (including hip flexion and extension, knee flexion and extension, ankle dorsi and plantar flexion). - Upper body movements for lifting and carrying including shoulder flexion, forearm flexion, finger flexion (for gripping). - Upper body movements for digging around reticulation, including shoulder flexion and extension, abduction and adduction, forearm flexion and extension, forearm pronation and supination, finger flexion and extension, wrist rotation. - Forearm activation for using gripping tool (including gripping, forearm flexion, extension, supination, rotation, shoulder abduction, flexion and rotation and digit flexion extension). - Spinal movements including stooping, forward bending, rotation: back and neck flexion and rotation.
SUSTAINED RISK FACTORS	- Gripping using tools and equipment. - Shoulder and elbow flexion throughout digging and tool use. - Lumbar flexion through digging. - Crouching/kneeling through repairing reticulation. - Neck flexion
REPETITIVE RISK FACTORS	- Shoulder and elbow flexion and extension. - Wrist flexion, extension and rotation throughout shovelling and tool use - Frequent forward bending or stooping - Finger manipulation of reticulation
RISK INJURY AREAS	- Wrist, hand or elbow injuries from working with reticulation. - Back, upper limb, leg sprain or strain from digging postures and actions (see Digging task analysis) if fail to use legs (e.g. bend at hips, knees, ankles). - Hip, knees, back, neck from sustained awkward postures
MODIFICATIONS	- Pre-start warm up. - Choosing the right tool for the nature of soil is important e.g. for rocky soil a pick axe is better suited to working more effectively with the soil, to reduce the risk of exertion through the digging task. - Attend to reticulation maintenance tasks outside of peak temperature times through the day so as to work with soil that is softer from dampness. - When using pick axes or shovels, position feet in a lunge position and bend at the knees to reduce flexion of the spine. - When crouching/kneeling to fix reticulation, position the body as close to the task as possible to avoid uncomfortable or awkward shoulder reaching.
ENVIRONMENTAL FACTORS	Heat and cold associated with outdoor temperatures increase risk for soft tissue injury, especially in relation to physical workload and intensity of digging. Risk of dehydration during physical exertion outdoors.
OTHER FACTORS	Individual factors including person's lifting capabilities, strength, build and fitness level. Extent of onsite training, induction and knowledge around job processes and equipment.

JOB TASK ANALYSIS MAINTENANCE – SHOWER HEADS

PHYSICAL DEMAND	Medium
MOVEMENTS	• Bilateral lower limb coordination to stand, walk and turn. • Hip and knee flexion and extension. Ankle dorsiflexion and plantar flexion. • Cervical flexion, extension, and rotation combined with upper limb use. • Shoulder flexion (overhead) bilateral combined with abduction, and varied degrees of rotation. • Wrist held neutral with radial and ulnar deviation. • Elbow flexion and extension with forearm pronation and supination. • Flexion and extension of thumbs and fingers as required to grasp item. • Moderate abdominal and spinal muscle contraction for stability.
SUSTAINED RISK FACTORS	• Sustained light gripping. • Sustained arms in flexion and abduction - sustained periods overhead • Sustained cervical extension. • Standing
REPETITIVE RISK FACTORS	• Frequent shoulder flexion, extension, adduction and abduction. • Constant elbow flexion and extension. • Constant forearm pronation and supination. • Constant wrist extension and flexion. • Frequent hip flexion and extension, plus knee flexion and extension. • Frequent ankle dorsiflexion and plantar flexion.
RISK INJURY AREAS	• Back, shoulders, wrists, elbows and shoulder strains if maintain poor posture when performing standing and reaching activities. • Back muscles and spine structures if fail to use legs (i.e. bend at hips, knees and ankles) to lower body and reach lower items rather than maintaining neutral spine. • Knees and backs if twisting - feet facing different way to trunk. • Neck due to sustained extension, leading to poor blood flow and increased risk of injury. • Shoulder cumulative injury due to repeated tasks requiring use of force whilst positioned in various degrees of flexion and abduction. • Hands, wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm take the entire load – leading to fatigue and strain or sprain. • Shoulder injury if uncontrolled twisting or repeated cross centreline reaching. Both of these lead to increased risk of impingement.
MODIFICATIONS	• Regular re-set stretches and postural exercises. • Keep close to the task: attempt to work with elbows and hands below shoulder height - use of safety step if appropriate. • Ambidextrous use of upper limbs maintaining neutral working postures of the joints, to reduce internal rotation of shoulder and risk of impingement. • Maintain neutral curve of spine at all times. Lift items using lower limb muscles more than upper and spinal musculature. • Stand with joints in slight flexion. . • Move feet to face where working so that no injurious twisting of knees and spinal structures occurs. • Correctly fitting gloves – poorly fitting gloves result in greater muscle use to perform task and fatigue occurring faster. • Use power grip (whole hand) rather than pinch grip (fingers only).
ENVIRONMENTAL FACTORS	Environmental factors: Weather and temperature may play a role in determining susceptibility to injury– e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration. Length of sustained posture and overall level of force and movement repetition will vary based on number of shower heads to maintain, the shower design and size.
OTHER FACTORS	Daily repetitions of an action will be determined the type of shower head, and the state it is in – if very difficult to remove due to greater calcium build-up means greater force is required to remove, clean and replace. Select appropriate tools for the task. Slip hazards.

JOB TASK ANALYSIS MAINTENANCE – SWIMMING POOL

PHYSICAL DEMAND	Light - Medium
MOVEMENTS	• Bilateral lower limb coordination to squat, kneel, stand, walk and turn. • Full range of hip and knee flexion and extension. Ankle dorsiflexion and plantar flexion. • Cervical flexion and rotation. • Shoulder flexion with slight abduction/adduction, varied degree of rotation. • Wrist flexion or extension, radial and ulnar deviation. • Elbow flexion and extension with pronation and supination. • Flexion of thumbs and fingers. • Finger manipulation. • Sustained standing
SUSTAINED RISK FACTORS	• Cervical flexion. • Standing or other posture/position for task
REPETITIVE RISK FACTORS	• Frequent hip and knee flexion and extension, Ankle dorsiflexion and plantar flexion. • Frequent cervical rotation. • Constant shoulder flexion and abduction/ adduction combined with varied degree of rotation of shoulders. • Frequent wrist flexion, extension, radial and ulnar deviation. • Constant elbow flexion and extension, forearm pronation and supination. • Constant flexion and extension of thumbs and fingers as required to grasp item.
RISK INJURY AREAS	• Back muscles and spine structures, shoulders, wrists, elbows and shoulder strains - if poor manual handling technique when performing movements and/or upper limb activities. • Knees and back - if feet facing different way to trunk. Joints and muscles are susceptible to injury in situations of twisting. • Neck due to sustained flexion, combined with upper limb activity - leads to poor blood flow and increased risk of strain, sprain and muscle cramp. • Hands, wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm take the load – leading to fatigue and strain or sprain. • Shoulder injury - if uncontrolled twisting or repeated cross centreline reaching. Both of these lead to increased risk of impingement.
MODIFICATIONS	• Place item (if weight appropriate) onto bench between waist and shoulder height. • Maintain neutral spine at all times. Use lower limb joints (hip, knee and ankle) to position body as close to task as possible. Lean hips onto bench – to reduce demands on postural muscles. Lift items using lower limb muscles more than upper and spinal musculature. • Regular re-set stretches and postural exercises. • Stand with joints in slight flexion.
ENVIRONMENTAL FACTORS	Temperature may play a role in determining susceptibility to injury - cold leads to reduced blood circulation to the peripheries which reduces flexibility of tissue, and stiffness, and increase likelihood of injury. Heat can lead to dehydration and fatigue.
OTHER FACTORS	Temporal factors will alter how staff move when performing the task: pressure to complete tasks quickly results in rushing, less correct movement, and greater likelihood of a misjudged activity and injury. Individual factors will alter how a staff member's body is affected by the environment: stronger and fitter staff are less likely to sustain injuries.

JOB TASK ANALYSIS MAINTENANCE – TAPS

PHYSICAL DEMAND	Medium
MOVEMENTS	• Bilateral lower limb coordination to squat, stand, walk and turn. • Hip and knee flexion and extension. • Ankle dorsiflexion and plantar flexion. • Cervical flexion and rotation. • Shoulder flexion bilateral with abduction combined with a degree of rotation. • Wrist flexion, extension, moderate radial and ulnar deviation. • Elbow flexion and extension plus moderate pronation and supination. • Flexion and extension of thumbs and fingers as required to grasp taps/tools. • Standing, stooping, forward bending, crouching, kneeling
SUSTAINED RISK FACTORS	• Sustained light gripping. • Sustained arms in flexion and abduction. • Sustained cervical extension or flexion. • Sustained working posture - dependent on tap height/location
REPETITIVE RISK FACTORS	• Frequent shoulder flexion, extension, adduction and abduction. • Constant elbow flexion and extension. • Constant forearm pronation and supination. • Constant wrist extension and flexion and deviation. • Frequent walking, squatting, crouching, stooping kneeling, and lunging • Frequent ankle dorsiflexion and plantar flexion.
RISK INJURY AREAS	• Back, shoulders, wrists, elbows and shoulder strains - if maintain poor posture when performing standing and reaching activities. • Back muscles and spine structures - if fail to use legs (i.e. bend at hips, knees and ankles) to lower body and reach lower items.. • Knees and spine - if feet facing different way to trunk and twisting occurs. Joints and muscles are susceptible to injury in situations of twisting. • Neck due to sustained flexion or extension, elongation of spinal muscles leads to poor blood flow and increased risk of strain, sprain and cramp. • Shoulder cumulative injury due to repeated tasks requiring use of force whilst positioned in flexion and abduction. • Hands, wrists and forearms when inefficient grip is used and smaller muscles take the entire load – leading to fatigue and strain or sprain. • Shoulder injury if uncontrolled twisting or repeated cross centreline reaching. Both of these lead to increased risk of impingement.
MODIFICATIONS	• Regular re-set stretches and postural exercises. • Ambidextrous use of upper limbs where possible, maintaining neutral joint positions - to reduce load on dominant arm, and minimise internal rotation of shoulder and risk of impingement. • Maintain neutral curve of spine at all times. Lift items using lower limb muscles more than upper and spinal musculature. • Keep body close to the task at hand. Attempt to work with elbows and hands below shoulder height - use of safety step in event that they are forced to work with hands above shoulders. Stand with joints in slight flexion. Lean against bench to avoid forward bend/stooping. • Move feet to face where working so that no twisting of knees and spinal structures occurs. • Correctly fitting gloves – poorly fitting gloves result in greater muscle use to perform task and fatigue occurring faster. • Use power grip (whole hand) rather than pinch grip (fingers only).
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury in – e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration. Length of sustained posture and overall level of force and movement repetition will vary based on the location/height of taps.
OTHER FACTORS	Daily repetitions of an action will be determined the type and number of taps, and the state they are in –greater calcium build-up or if seized means greater force is required to remove, clean and replace. Select appropriate tool for the task. Slip hazards.

JOB TASK ANALYSIS MAINTENANCE – TOILETS

PHYSICAL DEMAND	Medium
MOVEMENTS	• Bilateral lower limb coordination to squat, stand, walk and turn. • Full range of hip and knee flexion and extension, ankle dorsiflexion and plantar flexion. • Cervical flexion and rotation. • Shoulder flexion, abduction/ adduction combined with varied degree of rotation of shoulders. • Elbow flexion and extension, forearm pronation and supination. • Wrist in neutral, muscles stabilising. . • Forearm and hand muscles active to grip. • Flexion and extension/manipulation of thumbs and fingers as required. • Moderate abdominal and spinal muscle contraction for stability. • Sustained kneel, squat, crouch. • Stooping, forward bending.
SUSTAINED RISK FACTORS	• Sustained light gripping – finger flexion. • Sustained arms in small amount of abduction and forward flexion. • Sustained working position - kneel, squat, crouch, stooping, forward bend.
REPETITIVE RISK FACTORS	• Constant shoulder flexion, extension, adduction and abduction. • Frequent elbow flexion and extension. • Frequent forearm pronation and supination. • Frequent wrist extension and flexion. • Constant hip flexion and extension, plus knee flexion and extension. • Frequent ankle dorsiflexion and plantar flexion.
RISK INJURY AREAS	• Back, shoulders, knees, wrists, elbows and shoulder strains - if using incorrect postures or manual handling techniques throughout task. Particularly in instance of sustained, awkward postures below knee height. • Knees and back - if feet facing different way to upper body. Joints and muscles are susceptible to injury in situations of twisting. • Pressure injury (neuralgic, bruising or blisters) hands on tools requiring force, such as plunger. Knees - kneeling. • Shoulder cumulative injury due to repeated tasks requiring use of force whilst positioned in flexion and abduction, protracted in relation to spine. • Hands, wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm take the entire load – leading to fatigue and strain or sprain. • Shoulder injury if uncontrolled twisting or repeated cross centreline reaching due to awkward posturing/task difficult to reach. These lead to increased risk of impingement.
MODIFICATIONS	• Regular reset stretches. • Use appropriate tools for task that allows for efficient hand position and gripping. Use a gentle controlling grip, not a heavy grip. Keep body as close to task as possible, to reduce demands on postural muscles. May require frequent position changes. • Maintain neutral spine position by using legs to lower body, all joints – rather than flexing through spine. • Use both hands while maintaining neutral working positions of joints to reduce internal rotation/impingement of shoulder, reduce load on dominant hand. Avoid applying force through hands, upper body in awkward postures - seek assistance, use appropriate tools. • Correctly fitting gloves – poorly fitting gloves result in greater muscle use to manipulate linen and muscles fatiguing faster. • Use power grip (whole hand) rather than pinch grip (fingers only).
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury – e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration. Length of sustained posture and overall level of force and movement repetition will vary based on the bathroom layout, and toilet type.
OTHER FACTORS	Daily repetitions of an action and force required for the task will be determined by state of the toilet, quality of tools, and efficiency of method. Effect on staff will depend on physical factors such as flexibility, and expertise. Hazardous substances/body fluids.

JOB TASK ANALYSIS MAINTENANCE – USE VEHICLE JACK

PHYSICAL DEMAND	Medium
MOVEMENTS	• Bilateral lower limb coordination to sit, stand, crouch, kneel, walk and turn. • Moderate range of hip flexion, extension, knee flexion and extension. Ankle dorsiflexion and plantar flexion. • Cervical flexion, extension, and rotation. • Thoracic and lumbar flexion and rotation. • Slight shoulder flexion bilateral or unilateral – sustained. Slight shoulder abduction/ adduction, varied degree of rotation of shoulders. • Unilateral/bilateral wrist flexion, extension, radial and ulnar deviation. Flexion and extension of thumbs and fingers as required to grasp item with moderate intensity. • Elbow flexion and extension and forearm pronation/supination.
SUSTAINED RISK FACTORS	• Grip on handle – flexion of fingers and activation of forearm muscles. • Shoulder stabilising musculature. • Arms in slight flexion. • Cervical flexion. • Position to complete task - stooping, crouch, squat, forward bend
REPETITIVE RISK FACTORS	• Constant shoulder flexion and extension, abduction, adduction and rotation • Frequent elbow flexion and extension, pronation, supination • Constant finger and thumb flexion. • Frequent cervical rotation. • Frequent hip and knee flexion and extension.
RISK INJURY AREAS	• Back muscles and spine structures, wrist, shoulder and elbow strains - if incorrect manual handling techniques when performing any part of task • Knees and back - if feet facing different way to upper limbs. Joints and muscles are susceptible to injury in situations of twisting. • Neck due to sustained flexion, leads to poor blood flow and increased risk of strain, sprain and muscle cramp. • Shoulder, elbow, wrist cumulative injury due to repeated tasks requiring use of force in flexion and abduction rather than generating movement/force with body weight and leg strength. • Hands, wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm take the entire load – leading to fatigue and strain or sprain.
MODIFICATIONS	• Regular re-set stretches and postural exercises. • Maintain neutral spine at all times. Use lower limb joints (hip, knee and ankle) to position body close to the task. • Use both arm and leg movement to perform task. With greater emphasis on lower limb muscles than upper and spinal musculature. This avoids excessive arm movement or back movement and reduces risk of strain/sprain. • Correctly fitting gloves – poorly fitting gloves result in greater muscle use to manipulate linen and muscles fatiguing faster. • Use power grip (whole hand) rather than pinch grips (fingers only).
ENVIRONMENTAL FACTORS	Weather, temperature may play a role in determining susceptibility to injury - cold leads to reduced blood circulation to the peripheries which reduces flexibility of tissue, and stiffness, and increased heat leads to dehydration and tissue being less healthy and able to cope with pressures. Uneven terrain may add to safety risk of using a vehicle jack.
OTHER FACTORS	Temporal factors will alter how staff move when performing the task. With pressure to complete tasks quickly, rushing will occur, meaning less correct movement, and greater likelihood of a misjudged activity and injury. The health of staff will alter risk of being injured – stronger and fitter staff are at less risk.

JOB TASK ANALYSIS MAINTENANCE – WHEELS ON TROLLEY/BIN

PHYSICAL DEMAND	Medium
MOVEMENTS	• Lower limb coordination for standing, walking and crouching including hip flexion and extension, knee flexion and extension and ankle dorsi and plantar flexion. • Shoulder flexion and abduction, forearm flexion and extension for reaching. Finger flexion and extension, wrist rotation and deviation, flexion and abduction, forearm pronation and supination for tool use, manoeuvring movements with tyre, tubing and screws. • Gripping movements to work with screws, hand tools, compressor, tyre. • Spinal flexion including back and neck flexion and rotation - stooping, forward bend, squat, crouch. • Pushing and pulling movements of upper and lower body to manoeuvre trolley.
SUSTAINED RISK FACTORS	• Gripping including use of hand tools, working with screws, grasping tube and tyre. • Sustained forearm and shoulder flexion when working with tyre. • Sustained neck flexion to view activities. • Sustained forward spinal flexion (stooping, forward bend) whilst working with tyre on trolley/bin.
REPETITIVE RISK FACTORS	• Wrist, elbow flexion and extension, ulnar/radial deviation, supination/pronation- while exerting force
RISK INJURY AREAS	• Forearm or wrist, especially when using tools or exerting force to change tyre tubing. • Spinal injuries if working in an awkward flexed/stooped position around trolley/bin. • Injuries to fingers/hand through use of tools.
MODIFICATIONS	• Use of an electric tool to undo screws and nuts from rim or trolley, to decrease the amount of wrist and arm supination/pronation. • Ensure that all work is done at bench height where possible to reduce spinal flexion and working in crouched positions. Seek assistance.
ENVIRONMENTAL FACTORS	Workshop may be prone to temperature fluctuations impacting on the operator being either hot or cool.
OTHER FACTORS	The individual's risk factors around strength, overall and grip strength may be risk factors for injury when undertaking this task

JOB TASK ANALYSIS MOP

PHYSICAL DEMAND	Medium - Heavy
MOVEMENTS	- Finger and thumb flexion, and adduction to grip the mop handle. - Mild ranges of shoulder abduction and adduction, with some flexion and extension. - Elbow flexion and extension - Wrist flexion, extension. - Abdominal and spinal muscle contraction to stabilise the torso - Bilateral lower limb coordination. - Hip, knee and ankle flexion and extension, and hip abduction and adduction. - Sustained neck flexion. - Trunk rotation, forward bending, stooping, at times under load
SUSTAINED RISK FACTORS	- Standing posture - Cervical spine flexion. - Finger and thumb flexion, and adduction - gripping - Abdominal and spinal muscle contraction for stability
REPETITIVE RISK FACTORS	- Constant small range shoulder flexion and extension combined with constant shoulder abduction and adduction. - Constant hip and knee flexion and extension. - Frequent Hip abduction and adduction. - Frequent ankle flexion and plantar flexion - Frequent trunk rotation, forward bending and stooping at times under load
RISK INJURY AREAS	- Wrist, elbow, shoulder and low back if incorrect techniques used (i.e. overuse of upper body and lack of movement through the legs, inefficient grip on mop), risk increases with increased weight of the wet mop head, and when lifting/lowering and carrying mop bucket. - Sprain or strain of neck musculature and joints due to sustained muscle contraction linked with upper limb use, incorrect mopping technique, and observation of hand movements. - Shoulder cumulative injury due to repeated tasks requiring use of force whilst positioned in various degrees of flexion and abduction, protracted in relation to spine.
MODIFICATIONS	- Pre-start warm up - Use correct manual handling techniques to keep the task close and avoid forward bending or excessive arm movement throughout. - Regular postural exercises and stretches. - Always hold the mop close to body with both hands between hip and shoulder height. - Use a gentle controlling not heavy grip on the mop handle - Minimise arm movement by using the legs to move the mop around. - Use mechanised cleaning equipment where practical.
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration.
OTHER FACTORS	Length of sustained posture and overall level of force and movement repetition will vary based on surrounding furniture, condition of floor and room size. Daily repetitions of an action will be determined both by number of rooms cleaned and efficiency (method and state of room).

JOB TASK ANALYSIS MOVE ELECTRIC TROLLEY INCLUDES ELECTRIC PALLET JACK

PHYSICAL DEMAND	Light - Medium
MOVEMENTS	- Shoulders held in a neutral position with small flexion/ extension, adduction/ abduction and internal and external rotation motions - Light-moderate shoulder and leg muscle effort to guide the motion of the trolley or pallet jack. - Elbow flexion and extension. - Forearm pronation and supination. - Wrist full ROM. - Finger flexion and extension. - Hip flexion and extension - Knee flexion and extension - Ankle Dorsiflexion and plantar flexion
SUSTAINED RISK FACTORS	- Grip on handle – flexion of fingers and activation of forearm muscles. - Shoulder stabilising musculature. - Minimal contraction of stabilising muscles when moving and manoeuvring trolley
REPETITIVE RISK FACTORS	- Constant shoulder flexion, abduction and adduction with internal and external rotation and elbow flexion - Constant gripping - Constant hip and knee flexion/extension. - Constant ankle dorsi and plantar flexion.
RISK INJURY AREAS	- Knee joints and spine if legs are not used correctly to turn equipment, and instead the upper body is used, leading to greater twisting. Joints and muscles are susceptible to injury in situations of twisting. - Backs and shoulders sprained or strained if fail to activate core muscles and twist or flex spine rather than maintaining neutral spine. - Shoulder injury if uncontrolled twisting or repeated cross centreline reaching. Both of these lead to increased risk of impingement. - Wrists and hand structures if terrain crossed is rough and there is lots of vibration.
MODIFICATIONS	- Maintain neutral spine when guiding trolley. - Don't allow trolley to move more than half an arm's length from the torso when being guided. - Adequately plan trolley path. - Activate core musculature to stabilise at spine and reduce risk of twisting sprain/strain. - Lean body forward, keeping spine in neutral position, so that leg strength and body weight work to assist movement of trolley.
ENVIRONMENTAL FACTORS	Surface that the trolley must be moved across can alter the amount of force required to perform task. Rough surfaces and sloped surfaces may demand more force to achieve correct direction of trolleys. Weather and temperature may play a role in determining susceptibility to injury e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration.
OTHER FACTORS	Length of sustained posture and overall level of force and movement repetition will vary based on distance covered, model, age and condition of electric trolley/pallet jack. Rushing may increase risk of incident.

JOB TASK ANALYSIS MOVE / EMPTY GREEN BINS

PHYSICAL DEMAND	Medium – Heavy
MOVEMENTS	- Shoulders held in a neutral position with varying range flexion/ extension, adduction/abduction, internal and external rotation motions, under load. Elbow flexion and extension. Forearm pronation and supination. Wrist full ROM. Finger flexion and extension to grasp bin. - Considerable arm and leg musculature input to control the motion of the bin under load, and when loading/unloading bin liners. - Moderate abdominal, back and gluteal contraction to stabilise the body and control trolley/bin. - Walking, Squatting, Lunging: Hip flexion and extension. Knee flexion and extension. Ankle Dorsiflexion and plantar flexion.
SUSTAINED RISK FACTORS	- Standing - Cervical flexion. - Postural muscle activation.
REPETITIVE RISK FACTORS	- Frequent finger flexion and extension plus wrist movement for gripping, combined with finger adduction - Frequent elbow full ROM, forearm pronation and supination. - Frequent weight shift from foot to foot, hip flexion and extension (small range). - Occasional ankle dorsiflexion and plantar flexion. - Frequent knee flexion and extension plus lower limb muscle activation to lift and lower bin and bin bag manually.
RISK INJURY AREAS	- Shoulders if pulling rather than pushing bins to move them. - Back, shoulders, wrists, elbows and shoulder strains if using unsafe manual handling such as using upper body strength rather than legs to lift or push. - Back if fail to bend at hips, knees and ankles to lower body and take hold of bin - Wrists and hand structures over rough terrain and there is lots of vibration and / or more force is required to move bin.
MODIFICATIONS	- Use rubbish truck/compactor with side arm to eliminate manual handling of bins - Use electric bin lifter to minimise manual handling (including glass bin – see USE GLASS CRUSHER) - Use manual bin lifter for washing green bins to minimise manual handling - Pre-start warm up - Drill small holes in side of bin to reduce friction and force required to remove bag. - Tie off existing liner correctly and test weight before lifting out so able to use muscles to compensate for load and choose correct technique. - Keep body as close to task as possible. This will reduce load on postural muscles and reduce inclination to work with arms away from side of body. - Activate core musculature to stabilise spine, increase muscle readiness, and reduce risk of twisting sprain/strain. - Lift items using lower limb muscles at the same time as upper limb muscles to reduce load from upper limb.
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration.
OTHER FACTORS	Overall level of force will vary based on the rubbish bin type, volume/weight/type of rubbish within the bin, friction between bag and bin, and surface that the bin is being moved over. Length of sustained posture and repetition will be determined by number of bins emptied and efficiency of completing task. Rushing may increase likelihood of incident. Physical demand is negligible when mechanical aids are used.

JOB TASK ANALYSIS

MOVE TUBS OF FOOD INCLUDES EMPTYING BRAT PANS, BINS OF VEGETABLES, DEFROST TUBS

PHYSICAL DEMAND

Medium - Heavy

MOVEMENTS

- Lower limb coordination to stand, walk and turn.
- Hip flexion, extension, knee flexion and extension. Ankle dorsiflexion and plantar flexion. Under load.
- Cervical flexion, extension, and rotation
- Shoulder flexion. Shoulder abduction/ adduction combined with rotation of shoulders
- Bilateral wrist flexion, in ulnar deviation.
- Elbow flexion and forearm pronation and supination.
- Flexion of thumbs and fingers as required to grasp item with moderate intensity.
- Stooping, forward bending, squatting, lifting

SUSTAINED RISK FACTORS

- Grip- flexion of fingers and activation of forearm muscles.
- Shoulder stabilising musculature.
- Standing
- Stooping and bending (varying degrees) depending on height of tub on trolley/dolly

REPETITIVE RISK FACTORS

- Constant shoulder flexion
- Frequent shoulder abduction and adduction
- Frequent shoulder internal and external rotation
- Constant hip and knee flexion and extension. Ankle dorsiflexion and plantar flexion - under load
- Frequent cervical flexion, extension, and rotation
- Stooping, squatting, bending

RISK INJURY AREAS

- Spine if fail to use legs (i.e. bend at hips, knees and ankles) to lower body and reach lower items. This increases risk of strain and sprain if task is performed with flexed or overextended spine rather than maintaining neutral spine
- Back muscles and spine structures if perform any part of task with flexed spine rather than maintaining neutral spine
- Knees and backs if feet facing wrong way when performing task. Joints and muscles are susceptible to injury in situations of twisting.
- Neck due to sustained flexion, which leads to poor blood flow and increased risk of injury.
- Shoulder with use of force whilst positioned in flexion and/or abduction, protracted in relation to spine.
- Shoulders and wrists if poor technique – using upper body strength to perform movements rather than body weight and leg strength.
- Hands, wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm take the load – leading to fatigue and strain or sprain.

MODIFICATIONS

- Pre-start warm up and regular re-set stretches and postural exercises.
- Avoid lifting and carrying tubs of food any distance. Decant, partially-fill and have size/weight limits on tubs to reduce weight of load. Seek assistance.
- Maintain neutral spine at all times. Tub should be stored and transported on tub truck/dolly or scissor jack. If on tub truck/dolly, another tub can be placed on top to push – to avoid stooping or forward bending
- Use legs to move the tub truck/dolly or scissor jack.
- Do not let tub get too far from body when pushing – to avoid flexion and reduce reaching and torque on spine and shoulders. Always face direction of travel to avoid twisting.
- Ambidextrous use of upper limbs maintaining neutral postures of joints.

ENVIRONMENTAL FACTORS

Temperature may play a role in determining susceptibility to injury - cold leads to reduced blood circulation to the peripheries which reduces flexibility of tissue, and heat can lead to dehydration reduces health of tissue. Space, surface of floor, and organisation of the environment also alters the risk of injury occurring – if there is more crowding and poor organisation then more reaching, force, and/or physical activity required, this increases likelihood of strain injury.

OTHER FACTORS

Temporal factors will alter how staff move when performing the task. When there is pressure to complete a task quickly then rushing will occur, incorrect manual handling is likely, and greater likelihood of a misjudged activity and injury. Seek assistance.

JOB TASK ANALYSIS MOVE POTS/PANS

PHYSICAL DEMAND	Medium
MOVEMENTS	- Bilateral lower limb coordination to stand, walk and turn. - Use of leg muscles and gluteals to stand and lift item. - Hip flexion, extension, knee flexion and extension. Ankle dorsiflexion and plantar flexion. - Cervical flexion, extension, and rotation. - Shoulder flexion bilateral, unilateral; and abduction/adduction combined with slight rotation – under load. - Bilateral wrist neutral in slight ulnar deviation – under load - Elbow flexion and extension with forearm supination – under load - Flexion and extension of thumbs and fingers as required to grasp item – variable weights. - Squatting, forward bending, stooping, reaching above shoulders/overhead.
SUSTAINED RISK FACTORS	Standing
REPETITIVE RISK FACTORS	- Frequent hip flexion, extension, knee flexion and extension. Ankle dorsiflexion and plantar flexion. - Frequent shoulder flexion bilaterally. Slight abduction/ adduction. - Frequent bilateral Elbow and Wrist flexion and wrist ulnar deviation. - Constant flexion and extension of thumbs and fingers as required to grasp item with moderate intensity.
RISK INJURY AREAS	- Back, shoulders, wrists, elbows and shoulder strains if maintain poor posture when performing standing and reaching activities. - Knees and backs if feet facing wrong way - joints and muscles are susceptible to injury in situations of twisting. - Wrist, elbows and shoulders strains if using incorrect procedure such as standing still and moving item using only arms, or using dominant hand only. - Shoulder cumulative injury due to repeated tasks requiring use of force whilst positioned in various degrees of flexion and abduction, i.e. overreaching. - Shoulder injury if uncontrolled twisting or repeated cross centreline or overhead reaching. All of these can increase risk of impingement. - Hands, wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm take the entire load – leading to fatigue and strain or sprain.
MODIFICATIONS	- Regular posture re-set stretches and exercises. - Items should be placed on shelves between knee and shoulder height. Use of safety step in event that storage is necessary above shoulder height. Bend at hips, knees and ankles to reach down. - Ensure there is nothing in front of shelves when placing item—to reduce reaching distance and torque on spine and shoulders. - Bilateral use of upper limbs to avoid overloading one arm, while maintaining neutral joint positioning to reduce risk of impingement. - Maintain neutral spine at all times. Use lower limb joints (hip, knee and ankle) to position body. - Move feet to face the task and/or direction of travel, so that no injurious twisting of knees and spinal structures occurs. - Lift items using lower limb muscles more than upper and spinal musculature. - Seek assistance for heavier, larger items.
ENVIRONMENTAL FACTORS	Room layout, temperature, and furniture/equipment will alter position and range of joint movement demanded. Temperature, e.g. heat of kitchen, may increase risk of injury from effects of fatigue, dehydration.
OTHER FACTORS	Temporal factors will alter how staff move when performing the task: pressure to move faster e.g. during service, can lead to rushing and increasing risk of injury. Staff individual physical features will also impact risk: fitter, stronger staff will be less affected by force required – as muscles will not fatigue as quickly. Height of staff will alter what range of movement is required to perform task with correct posture. Variable force generation required depending on size, shape, and weight of pots/pans to be moved.

JOB TASK ANALYSIS MOVE / STACK FURNITURE

PHYSICAL DEMAND	Medium - Heavy
MOVEMENTS	• Hip and knee flexion and extension plus ankle dorsiflexion under load • Bilateral shoulder flexion and extension with shoulder abduction and adduction under load • Flexion and extension of thumbs and fingers to grasp. • Elbow flexion/extension and supination/pronation under load. • Wrist in neutral, forearm and hand muscles actively stabilising. • Forward bending, stooping, lunging, squatting, crouching, kneeling • Trunk rotation
SUSTAINED RISK FACTORS	• Standing
REPETITIVE RISK FACTORS	• Frequent hip and knee flexion and extension, ankle dorsiflexion and plantar flexion. • Constant bilateral shoulder and elbow flexion, with shoulder abduction and adduction. • Frequent movement required under load from varying heights: above shoulder to below knee
RISK INJURY AREAS	• Back muscles and spine structures - if fail to use legs (i.e. bend at hips, knees and ankles) to lower body and reach lower items. This increases risk of strain and sprain if task is performed with flexed spine • Shoulder, neck, back, knees and upper limb joints and muscles are susceptible to injury when twisting. • Shoulders and wrists if unsafe manual handling technique – such as using upper body strength to perform movements under load.
MODIFICATIONS	• Pre-start warm up • Regular re-set stretches performed to reduce muscle tension, and pressure placed on joints – therefore reducing likelihood of cumulative injury. • Maintain neutral spine at all times. Use lower limb joints (hip, knee and ankle) to position body so that neutral spine can be maintained. • Keep joints in slight flexion and activate core musculature to stabilise at spine and reduce risk of twisting sprain/strain. Face the direction of travelling – with hips, nose and toes all facing the same direction. • Lift furniture using safe manual handling techniques. Seek assistance. • Use mechanical aids where possible.
ENVIRONMENTAL FACTORS	Temperature may play a role in determining susceptibility to injury e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration.
OTHER FACTORS	Length of sustained posture and overall level of force and movement repetition will vary based on the size, shape and weight of furniture and volume to be moved.

JOB TASK ANALYSIS

MOVE TROLLEY

EXAMPLES: LINEN TROLLEY, TRAY TROLLEY, ICE WELLS, CATERING TROLLEY, PLATE TROLLEY, MANUAL PALLET JACK, CAGE TROLLEY, FRIDGE TROLLEY, SCISSOR TROLLEY

PHYSICAL DEMAND

Medium - Heavy

MOVEMENTS

- Shoulders held in a neutral position with small flexion/ extension, adduction/abduction, internal and external rotation motions. Elbow flexion and extension. Forearm pronation and supination. Wrist full ROM. Finger flexion and extension to grasp trolley.
- Considerable arm musculature input to control the motion of the trolley under load.
- Moderate abdominal, back and gluteal contraction to stabilise the body and control trolley, often pushing under load.
- Hip flexion and extension. Knee flexion and extension. Ankle Dorsiflexion and plantar flexion.

SUSTAINED RISK FACTORS

- Grip on handle – flexion of fingers and activation of forearm muscles.
- Shoulder stabilising musculature.
- Minimal contraction of stabilising muscles when moving and manoeuvring trolley

REPETITIVE RISK FACTORS

- Constant shoulder flexion, abduction and adduction with internal and external rotation
- Constant hand gripping – finger and thumb flexion.
- Constant hip flexion, extension, knee flexion and extension, ankle dorsiflexion and plantar flexion.

RISK INJURY AREAS

- Shoulders, wrists, knees and back if upper body strength and twisting used to turn trolley. Joints and muscles are susceptible to injury in situations of twisting and / or cross-centreline reaching. Movement should be generated by body weight and leg strength.
- Backs and shoulders sprained or strained if fail to activate core muscles and maintain a neutral spine posture.
- Wrists and hand structures if terrain crossed is rough and there is lots of vibration and / or more force is required to move trolley.
- Pinch points e.g. between trolley and doorways.

MODIFICATIONS

- Pre-start warm up
- Ensure trolley is packed according to agreed uniform manner so that items are always kept where expected and trolley is balanced.
- Lean body forward, keeping spine in neutral position, so that leg strength and body weight work to PUSH trolley. Drive movement and force applied to trolley through legs.
- Activate core musculature to stabilise neutral spinal posture and reduce risk of twisting sprain/strain.
- Hands placed below shoulder height.
- Don't allow trolley to move too far away from the body – elbows should be bent during push.
- Adequately plan trolley path. Gain assistance from another if the path is known to have large slope or rough/loose surfaces.

ENVIRONMENTAL FACTORS

Surface that the trolley must be moved across can alter the amount of force required to perform task: rough surfaces and sloped surfaces also demand more force to achieve movement of trolleys. Manual trolleys require more force than motorised ones. Weather and temperature may play a role in determining susceptibility to injury e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration.

OTHER FACTORS

Length of sustained posture and overall level of force and movement repetition will vary based on load, distance, surface, e.g. If the workload is not well organised then they have to push the trolley further – increasing likelihood of incident. Number of staff also alters risk rating = if staff can alternate the task of trolley pushing then there is less chance of fatigue. Maintenance of trolley and size/type of wheels will reduce rolling resistance. Weight of trolley will alter how much force is required. Physical capabilities of staff e.g. cardiovascular fitness and strength – will alter how the forces affect them. Temporal factors – if there is any rushing there is greater likelihood of mistakes being made and injuries occurring.

EQUIPMENT	FORCE REQUIRED TO MOVE	
	PUSH	PULL
Plate trolley (loaded)	8kg	10kg
Single tray trolley (half-filled)	5kg	5kg
Double tray trolley (empty)	5kg	7kg
Double tray trolley (full)	18kg	15kg
Ice wells (loaded)	20kg	20kg

JOB TASK ANALYSIS MULCHING

PHYSICAL DEMAND	Medium - Heavy
MOVEMENTS	- Bilateral lower limb coordination to stand, squat, lunge, walk and turn. - Moderate range of Hip flexion, extension, knee flexion and extension. Ankle dorsiflexion and plantar flexion - under load - Cervical spine flexion and rotation. - Bilateral shoulder and elbow flexion and extension. Some shoulder abduction/adduction and rotation - under load - Wrist flexion, extension, radial and ulnar deviation, Forearm pronation and supination - under load - Flexion and extension of thumbs and fingers as required grasping shovel with moderate intensity. - Stooping, forward bending, squatting, lunging
SUSTAINED RISK FACTORS	- Gripping. - Standing. - Cervical flexion and rotation.
REPETITIVE RISK FACTORS	- Constant shoulder flexion, abduction and adduction. - Constant elbow flexion, extension, pronation and supination. - Constant wrist flexion, radial and ulnar deviation. Frequent pronation/supination - Constant hip and knee flexion. - Constant ankle dorsiflexion and plantar flexion.
RISK INJURY AREAS	- Back, shoulders, wrists, elbows and shoulder strains if maintain poor manual handling technique when performing standing, shovelling and reaching activities. - Knees, shoulders and back if feet facing opposite task, i.e. twisting to place mulch into bin. - Neck due to sustained flexion, elongation of spinal muscles: leads to poor blood flow and increased risk of injury. - Wrist elbows and shoulders strains if using incorrect procedure such as over-reaching rather than positioning the body in a position close to mulch. - Shoulder and back cumulative muscular injury due to repeated tasks requiring use of force whilst positioned in various degrees of flexion, rotation, abduction, poor hand positioning and repeated cross centreline reaching.
MODIFICATIONS	- Use mechanical aids/equipment/vehicles where possible e.g. Gator, mower, tip trailer to reduce manual labour in transporting/distributing mulch - Position bin/wheelbarrow/trailer close to task to reduce the risk of twisting. - Perform regular posture re-set stretches and exercises - Maintain neutral spine at all times. Use lower limb joints (bend at hip, knee and ankle) to position body close to the task, e.g. squat, lunge. - Avoid twisting - always move feet to turn. - Always hold the handle of the shovel with one hand and position the other hand a comfortable distance further down to control movement.
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury creating varied conditions for gardeners to work in – e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration
OTHER FACTORS	Overall level of force and length of movement repetition will vary based on the amount of mulch to be collected/distributed, and size and terrain of area to be covered.

JOB TASK ANALYSIS OPEN / CLOSE LUGGAGE COMPARTMENT

PHYSICAL DEMAND	Medium
MOVEMENTS	• Bilateral lower limb coordination to stand, and step backwards. • Hip flexion, extension, knee flexion and extension. Ankle dorsiflexion and plantar flexion. • Cervical flexion, extension, and rotation • Near end range shoulder flexion bilateral, abduction and then adduction. Combined with varied degree of rotation of shoulders. • Bilateral wrist extension then flexion. • Combined upper limb and cervical spine joint movement and coinciding musculature use • Elbow flexion and extension. • Forearm pronation, into supination and back as door lifts then lowers. • Flexion and extension of thumbs and fingers as required to grasp with moderate intensity. • Moderate abdominal and spinal muscle contraction for stability.
SUSTAINED RISK FACTORS	• Shoulder protraction with working position - hands in front of body. • Contraction of stabilising muscles when opening compartment doors. • Standing.
REPETITIVE RISK FACTORS	• Frequent shoulder flexion and extension. • Frequent elbow extension and flexion. • Constant gripping – finger flexion, and extension. • Frequent lumbar flexion and extension plus thoracic extension. • Frequent wrist extension and flexion. • Frequent knee and hip flexion and extension.
RISK INJURY AREAS	• Back, shoulders, wrists, elbows and shoulder strains if maintain poor posture when performing standing and reaching activities. • Spine if fail to use legs (i.e. bend at hips, knees and ankles) to assist moving compartment door • Back muscles and spine structures if perform any part of task with flexed spine rather than neutral spine. • Knees and backs if feet facing wrong way. Joints and muscles are susceptible to injury in situations of twisting. • Shoulder due to use of force whilst positioned in various degrees of flexion and abduction, protracted in relation to spine. • Hands, wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm take the entire load – leading to fatigue and strain or sprain. • Shoulder injury if uncontrolled twisting, one-sided, or repeated cross centreline reaching. These can lead to increased risk of impingement.
MODIFICATIONS	• Regular re-set stretches and Regular postural exercises. • Ambidextrous use of upper limbs maintaining neutral postures to reduce internal rotation of shoulder and risk of impingement. • Maintain neutral spine at all times. Use lower limb joints (hip, knee and ankle) to position body so that neutral spine can be maintained. • Keep body as close to task as possible. Move feet to step forward and back so keep close. • Avoid standing using ligaments and other passive structures for stability. Keep joints in slight flexion – never into end of range extension. • Activate core musculature to stabilise at spine and reduce risk of twisting sprain/strain. • Use power grip (whole hand) rather than pinch grip (fingers only).
ENVIRONMENTAL FACTORS	Temperature can alter likelihood of work related musculoskeletal disorder – heat can lead to dehydration, and cold can lead to poor muscle flexibility – both increasing likelihood of injury.
OTHER FACTORS	Maintenance of door hinges/mechanisms will influence force required to open/close doors. Temporal factors will alter how staff move when performing the task. With rushing there is increased chance of poor muscle activation. Personal attributes will also alter the task risk – taller people will not have to reach as high for door handles, and fitter/stronger people will not be as affected by the weight of the door.

JOB TASK ANALYSIS PAINTING

PHYSICAL DEMAND	Medium - Heavy
MOVEMENTS	• Finger and thumb flexion, and adduction to grip paint brush and or handle of paint roller. • Shoulder flexion and extension, abduction and adduction • Elbow flexion and extension • Wrist flexion, extension. • Abdominal and spinal muscle contraction to stabilise the torso • Bilateral lower limb coordination. • Hip and knee flexion and extension • Ankle dorsiflexion and plantar flexion • Kneeling, squatting, crouching, lunging, standing • Stooping – neck and or back
SUSTAINED RISK FACTORS	• Posture with neck extension and flexion to observe task • Moderate hand grip on paint brush and or paint roller pole • Sustained abdominal activation
REPETITIVE RISK FACTORS	• Constant shoulder flexion, extension, adduction and abduction. • Frequent overhead shoulder extension • Constant elbow flexion and extension • Frequent forearm pronation and supination • Constant wrist extension and flexion • Frequent walking, kneeling, squatting, crouching, lunging, standing with hip flexion and extension, plus knee flexion and extension • Frequent ankle plantar and dorsiflexion
RISK INJURY AREAS	• Sustained neck posture leading to increased muscular tension and long term wear and tear on the joints in the neck. • Wrist, elbow, shoulder and low back • Spinal joints and knee joints if twisting and forward bending
MODIFICATIONS	• Pre-start warm up, posture breaks and stretches • Regular reset stretches to correct posture resulting from sustained neck postures. • Holding paint roller or brush with both hands between hip and shoulder height wherever possible. • Use a gentle controlling not heavy grip on the equipment handle
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury– e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration.
OTHER FACTORS	Length of sustained posture and overall level of force and movement repetition will vary based on wall or ceiling type, surface, height, and condition.

JOB TASK ANALYSIS PEEL VEGETABLES

PHYSICAL DEMAND	Light - Medium
MOVEMENTS	• Cervical flexion and rotation. • Slight shoulder flexion bilateral or unilateral. Slight shoulder abduction/ adduction combined with varied degree of rotation. • Bilateral wrist flexion, extension, radial and ulnar deviation. • Elbow flexion and extension combined with forearm pronation and supination. • Flexion and extension of thumbs and fingers as required to grasp tools and vegetables. • Finger manipulation.
SUSTAINED RISK FACTORS	• Standing. • Cervical flexion. • Shoulder in slight abduction and flexion. • Elbow in flexion • Gripping: finger and thumb flexion
REPETITIVE RISK FACTORS	• Cervical rotation. • Small range elbow flexion and extension and supination/pronation. • Shoulder flexion, abduction and adduction with varied rotation. • Finger and wrist extension/flexion
RISK INJURY AREAS	• Shoulder, elbow, wrist cumulative injury/strain with poor posture during light, repetitive task – particularly on dominant side. • Hands, wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm take the load – leading to fatigue. • Lower back, hips and knees – with long periods spent standing still on hard surface, especially if poor posture is maintained or twisting at joints occurs e.g. instead of stepping to turn. • Back muscles and spine structures if fail to maintain neutral spine or don't use legs (i.e. bend at hips, knees and ankles) to lower body to level of the task. • Neck due to sustained flexion, elongation of spinal muscles leads to poor blood flow and increased risk of injury. Neck strain, sprain and muscle cramp.
MODIFICATIONS	• Order pre-peeled (and cut) vegetables to reduce manual tasks. • Use automated or passive peeling techniques where possible e.g. potato tumbler, soaking, pre-cooking. • Provide utensils and knives with ergonomic handles designed for comfort and efficient use of hand and forearm muscles in gripping. • Workstation height and inclination correct for task will alter force and postural requirements. A table at elbow height is ideal. Use cutting boards, raised bench, or leg movement to create this situation if bench isn't at correct height. • Regular posture re-set stretches and exercises. • Maintain neutral spine at all times. Use lower limb joints (hip, knee and ankle) to position body close to task. • Keep body as close to task as possible, lean hips onto bench– to reduce demands on postural muscles. • Stand with joints in slight flexion.
ENVIRONMENTAL FACTORS	Room temperature may play a role in determining susceptibility to injury – e.g. cold can lead to reduced circulation and increased joint stiffness whereas heat may lead to higher level of dehydration.
OTHER FACTORS	Muscular exertions and movements are impacted by direction of hand motions, grip technique and posture as well as staffing/kitchen organisation e.g. task rotation and scheduling. Motor patterns and movements vary with experience and symptoms of pain. The number of movements, time per action, and grip force are all impacted by the type of food being peeled. Individual physical features will alter how their body handles the forces or is able to work at surface – taller workers must use legs to lower body and avoid slumping.

JOB TASK ANALYSIS PERFORM ROOM CHECKS

PHYSICAL DEMAND	Light
MOVEMENTS	• Bilateral lower limb coordination to stand, walk and turn. • Moderate range of hip flexion, extension, knee flexion and extension, ankle dorsiflexion and plantarflexion. • Cervical flexion, extension, and rotation. • Slight unilateral shoulder flexion. • Elbow flexion and extension. • Forearm pronation and supination. • Flexion and extension of thumbs and fingers as required to grip doorhandle with moderate intensity. • Use of leg and gluteal muscles to climb stairs, occasionally stoop, crouch, forward bend
SUSTAINED RISK FACTORS	• Cervical flexion, rotation to take note of walking path and stairs. • Palm/finger grip when carrying items
REPETITIVE RISK FACTORS	• Walking on even surfaces – Sustained gait involving hip flexion, extension, knee flexion and extension, ankle dorsiflexion and plantarflexion. • Ascending/descending stairs involving hip flexion, extension, knee flexion and extension, ankle dorsiflexion and plantarflexion. Increased joint loading compared to walking. Higher level of fatigue and risk of trips when frequently ascending/descending stairs.
RISK INJURY AREAS	• Lower limb strains and sprains from hyper extension of hip, knee and ankle joints due to walking with an inefficient gait, uneven terrain • Neck due to sustained flexion, elongation of spinal muscles leads to poor blood flow and increased risk of injury. Neck strain, sprain and muscle cramp.
MODIFICATIONS	• Avoid allowing knee joint to be fully extended whilst walking. Always maintain some degree of flexion throughout movement. • Maintain an even gait with a conservative stride length. • Minimise crossing the centre line of body with arms when reaching for doorhandles or objects. • Keep hands free where possible when walking to promote natural gait and maintain an ability to stop falls. Clip items such as radios and pens to belt or clipboard. • Maintain neutral spine at all times. • Stand with joints in slight flexion • Take one step at a time when ascending and descending stairs ensuring foot is fully supported in length on each step. Maintain 3 points of contact using hand rail.
ENVIRONMENTAL FACTORS	Effects of temperature can increase likelihood of injury – heat leading to dehydration and reduced health of body tissue, cold can lead to poor circulation to body tissue and reduced flexibility.
OTHER FACTORS	Larger sites with frequent room checks may benefit from the use of a golf cart to minimise fatigue accumulated from walking long distances.

JOB TASK ANALYSIS PICK UP RUBBISH

PHYSICAL DEMAND	Light - Medium
MOVEMENTS	• Bilateral lower limb coordination to stand, squat, walk and turn. • Hip, knee, and ankle flexion and extension. • Cervical flexion combined with rotation. • Shoulder flexion combined with rotation and abduction/ adduction. • Elbow flexion and extension with forearm pronation and supination. • Flexion and extension of thumbs and fingers as required holding items. • Moderate abdominal and spinal muscle contraction for stability. • Considerable stooping or forward bending, at times under load
SUSTAINED RISK FACTORS	• Cervical flexion and rotation. • Standing
REPETITIVE RISK FACTORS	• Frequent forward bending • Frequent hip and knee flexion and extension. Ankle dorsiflexion and plantar flexion. • Constant shoulder flexion bilateral or unilateral combined with abduction/ adduction and a varied degree of rotation. • Constant elbow flexion and extension with forearm pronation and supination. • Constant flexion and extension of thumbs and fingers as required to grasp item.
RISK INJURY AREAS	• Neck due to sustained muscle contraction with upper limb use, positioned in flexion. • Back muscles and spine structures due to frequent forward bending • Knees if movement of feet doesn't occur when turning/changing direction. Meniscal structures are susceptible to injury in situations of twisting. • Wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm take the entire load – leading to fatigue and strain or sprain. • Shoulder injury if uncontrolled twisting or repeated cross centreline reaching. Both of these lead to increased risk of impingement.
MODIFICATIONS	• Use pick up stick or other long-handled aids/equipment to collect rubbish. • Regular re-set stretches and postural exercises. • Ambidextrous use of upper limbs. Change hands occasionally. • Maintain neutral spine at all times. Use lower limb joints (hip, knee and ankle) to position/lower body so that neutral spine can be maintained. • Activate core musculature to stabilise at spine and reduce risk of twisting sprain/strain. • Do not allow bucket/bin to become overfull, or heavier than 2kg.
ENVIRONMENTAL FACTORS	Surface quality – if there is rough uneven ground to walk over then it will require better balance and coordination of lower limbs. Effects of temperature can increase likelihood of injury – heat leading to dehydration and cold can lead to poor circulation, both creating situation of body tissue being less able to cope with pressures or forces put on it.
OTHER FACTORS	Temporal factors will alter how staff move when performing the task: pressure to move faster can lead to rushing and increasing risk of injury. Staff individual physical features will also impact risk: fit, strong and flexible staff will be less affected by force required – as muscles will not fatigue as quickly. Height of staff will alter what range of movement is required to perform task with correct posture.

JOB TASK ANALYSIS PREPARE COFFEE

PHYSICAL DEMAND	Light
MOVEMENTS	- Shoulder flexion and abduction. - Elbow extension, flexion. Forearm pronation and supination. - Wrist extension and flexion and ulnar/radial deviation. - Finger flexion and extension. - Bilateral lower limb coordination. - Hip flexion, extension. Knee extension and to a lesser degree: flexion and ankle dorsiflexion and plantar flexion. - Cervical flexion and rotation, trunk rotation, occasional stooping/forward bending
SUSTAINED RISK FACTORS	- Neck flexion to review task. - Shoulder abduction and elbow flexion in pronation or supination. - Sustained gripping. - Sustained finger manipulation. - Standing
REPETITIVE RISK FACTORS	- Constant elbow flexion/extension under light load. - Constant finger flexion. - Frequent shoulder flexion and abduction; forearm pronation and supination with wrist extension/flexion and ulnar/radial deviation under light load. - Frequent lower limb flexion and extension.
RISK INJURY AREAS	- Potential strain to wrist, elbow or shoulder during repetitive reach and rotational activities, e.g. frequent flexion/extension and pronation/supination with wrist deviation under light loads. - Risk to elbow, wrist or fingers through gripping. - Risk of burns.
MODIFICATIONS	- Stand facing and close to grinding machine and coffee machine to reduce reach and minimise risk of awkward rotation. - Keep wrist in as neutral posture as possible. Apply pressure with hands gradually and evenly. - Position cup supply directly above coffee machine operation area to reduce reach and minimise risk of awkward rotation. Avoid stacking cup supply too high to reduce above-shoulder reach. - Keep milk supply in a refrigeration unit nearby that is upright and avoids the need for crouching or forward flexion. - Keep the floor area free of slip/trip hazards. - Keep milk placement at hip or mid torso level to reduce reach. - Ensure a stable grip on milk container to reduce risk of slippage. - Avoid prolonged hold by pouring milk efficiently. - Reduce tension during gripping of temperature gauge. - Monitor heating through temperature gauge and keep forearm rotations gentle and small. - Ensure cloth is sufficiently moist to reduce friction through task. - Ensure a stable grip on milk canister to reduce risk of slippage and potential burns. - Reduce unnecessary abduction (reaching to the sides). - Ensure even and gradual pressure to apply lid to cup, especially to avoid strains and burns.
ENVIRONMENTAL FACTORS	Temperature of café area affecting risk of injury, especially heat or cool, including air conditioning or doorways.
OTHER FACTORS	Demand for coffee may affect time spent performing task, rushing and risk of injury. Surrounding activities may also influence focus on coffee making including safety.

JOB TASK ANALYSIS PREPARE FOOD INCLUDING CRIB MEALS AND FUNCTION FOOD

PHYSICAL DEMAND	Light - Medium
MOVEMENTS	• Cervical flexion and rotation. • Slight shoulder flexion bilateral or unilateral. Slight shoulder abduction/ adduction combined with varied degree of rotation and reaching. • Bilateral wrist flexion, extension, radial and ulnar deviation. • Elbow flexion and extension combined with forearm pronation and supination. • Flexion and extension of thumbs and fingers as required grasping tools and food • Finger manipulation. • Standing, walking
SUSTAINED RISK FACTORS	• Standing. • Cervical flexion. • Shoulder in slight abduction and flexion. • Elbow in flexion • Gripping: finger and thumb flexion
REPETITIVE RISK FACTORS	• Cervical rotation. • Small range elbow flexion and extension and supination/pronation. • Shoulder flexion, abduction and adduction with varied rotation. • Finger and wrist extension/flexion
RISK INJURY AREAS	• Shoulder, elbow, wrist cumulative injury/strain with poor posture during light, repetitive task – particularly on dominant side. • Hands, wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm take the load – leading to fatigue. • Lower back, hips and knees – with long periods spent standing still on hard surface, especially if poor posture is maintained or twisting at joints occurs e.g. instead of stepping to turn. • Back muscles and spine structures if fail to maintain neutral spine or don't use legs (i.e. bend at hips, knees and ankles) to lower body to level of the task. • Neck due to sustained flexion, elongation of spinal muscles leads to poor blood flow and increased risk of injury. Neck strain, sprain and muscle cramp.
MODIFICATIONS	• Use automated slicing, peeling device where possible. • Use utensils and knives with ergonomic handles designed for comfort and efficient use of hand and forearm muscles in gripping where possible. • Workstation height and inclination correct for task will alter force and postural requirements. A table at elbow height is ideal. Use cutting boards, raised bench, or leg movement to create this situation if bench isn't at correct height. • Regular posture re-set stretches and exercises. • Maintain neutral spine at all times. Use lower limb joints (hip, knee and ankle) to position body close to task. • Keep body as close to task as possible, lean hips onto bench– to reduce demands on postural muscles. • Stand with joints in slight flexion and adjust stance regularly • Ensure tray trolley / trolley is close to reduce carrying
ENVIRONMENTAL FACTORS	Room temperature may play a role in determining susceptibility to injury – e.g. cold can lead to reduced circulation and increased joint stiffness whereas heat may lead to higher level of dehydration.
OTHER FACTORS	Muscular exertions and movements are impacted by direction of hand motions, grip technique and posture as well as staffing/kitchen organisation e.g. task rotation and scheduling. Motor patterns and movements vary with experience and symptoms of pain. The number of movements, time per action, and grip force are all impacted by the type of food being prepared. Individual physical features will alter how their body handles the forces or is able to work at surface – taller workers must use legs to lower body and avoid slumping.

JOB TASK ANALYSIS PRUNING

PHYSICAL DEMAND	Medium - Heavy
MOVEMENTS	- Bilateral lower limb coordination to stand, squat, walk and turn. - Moderate range of hip flexion, extension, knee flexion and extension. Ankle dorsiflexion and plantar flexion. - Cervical flexion and rotation. - Varied range shoulder flexion bilateral or unilateral – combined with abduction and rotation. - Elbow flexion and extension combined with forearm pronation and supination. - Flexion and extension of thumbs and fingers - grasping plant matter and tools - Stooping, forward bending, squatting
SUSTAINED RISK FACTORS	- Grip – finger and thumb flexion combined with ulnar rotation. - Cervical flexion and rotation. - Standing - Elbow flexion if holding power-assisted tools/equipment
REPETITIVE RISK FACTORS	- Constant shoulder flexion, abduction and adduction. - Frequent elbow flexion, extension, pronation and supination. - Constant wrist flexion, extension, radial and ulnar deviation. - Frequent hip and knee flexion and extension, ankle dorsiflexion and plantar flexion.
RISK INJURY AREAS	- Back muscles and spine structures, shoulders, elbows, wrists when using poor manual handling techniques. - Knees and spine if twist trunk to move arms to use pruning tool rather than move feet to turn and face the task. - Neck due to sustained flexion, elongation of spinal muscles: leads to poor blood flow and increased risk of injury. - Wrist, elbow and shoulder strains if sustained, frequent muscle activity for force generation, and high tension grip. - Shoulder cumulative injury due to repeated abduction/adduction and internal/external rotation while shoulders protracted.
MODIFICATIONS	- Physical demand varies dependent on use of equipment. Use of powered equipment such as hedge trimmer, chainsaw, polesaw reduces repetitive manual labour compared with using pruning saw, secateurs, pruning shears. - Hedge trimmer should be worn on a harness if available so that upper limbs don't have to carry weight. - Regular maintenance of equipment will ease the cutting of the flora and reduce force required to perform task. - Keep body close to the task: move feet and body while keeping arms close where possible to reduce risk of impingement – which is increased with sustained flexion and abduction of the shoulder and also excessive reaching. The hedge trimmer's movement arc should not be greater than 50cm away from the body. - Regular re-set stretches and postural exercises. - Ambidextrous use of upper limbs maintaining neutral posture working positions of joints. - Maintain neutral spine at all times.
ENVIRONMENTAL FACTORS	Ground surface type, gradient and plant type and shape of to be pruned alters body position and force required to hold tool in correct position. Effects of temperature can increase likelihood of injury – heat leading to dehydration, cold can lead to poor circulation to body tissue.
OTHER FACTORS	Physical features of the employee are important in reducing risk of injury – greater strength, flexibility and joint range of movement will reduce likelihood of injury. Quality of tools will also assist reducing force and time required to perform task.

JOB TASK ANALYSIS RAKING

PHYSICAL DEMAND	Medium
MOVEMENTS	• Cervical flexion and extension combined with varying degrees of rotation. • Bilateral and unilateral shoulder flexion, extension, abduction, and adduction. This is generally also combined with some degree of internal rotation. • Elbow flexion and extension. • Forearm pronation and supination. • Wrist extension and flexion, radial and ulnar deviation. • Finger flexion and extension. • Hip flexion and extension, Knee flexion and extension, Ankle dorsiflexion and plantar flexion. • Balance and coordination to stand, turn, walk, change direction
SUSTAINED RISK FACTORS	• Standing. • Cervical flexion. • Sustained gripping of a rake handle with clasped hands - wrist stabilisation, finger and thumb flexion.
REPETITIVE RISK FACTORS	• Constant bilateral shoulder flexion, extension, abduction and adduction, internal rotation. • Constant small arm movements - elbow flexion and extension plus forearm pronation and supination. • Frequent wrist extension, radial and ulnar deviation. • Frequent hip and knee flexion and extension, ankle dorsiflexion and plantar flexion.
RISK INJURY AREAS	• Neck due to sustained flexion. • Back muscles and spine structures, wrists, elbows and shoulders - if using incorrect procedure such as standing still and raking using arms, rather than positioning body close to area to be raked and constantly moving feet/shifting weight. • Back and knee strain - if twist rather than moving feet to keep work area in front of body.
MODIFICATIONS	• Consider use of power-assisted equipment to minimise physical demand of manual labour, e.g. blower vacuum, path sweeper • Rake within 2m radius of body. Using legs to step not arms to reach. • Always hold the rake with both hands between hip and shoulder height. • Use a light but controlling grip as a heavy grip may lead to fatigue in arm/wrist/hand musculature. • Minimise arm movement, by using the legs/ walking to move the rake. • Maintain neutral spine position at all times when performing task. • Regular re-set stretches to reduce loading of joints - particularly arms and legs.
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury creating varied conditions for gardeners to work in – e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration.
OTHER FACTORS	Overall level of force and length of movement repetition will vary based on the size of area to be raked and the type of material that is being raked.



JOB TASK ANALYSIS RECYCLING MANAGEMENT

PHYSICAL DEMAND	Medium
MOVEMENTS	- Bilateral lower limb coordination to squat, stand, walk and turn - Hip flexion, extension, knee flexion and extension, Ankle dorsiflexion and plantar flexion – at times under load - Cervical flexion and rotation - Shoulder flexion bilateral or unilateral with abduction, combined with varied degrees of rotation and elbow flexion/extension – under variable loads - Wrist in neutral, forearm pronation and supination, some radial and ulnar deviation - Flexion and extension of thumbs and fingers as required to grasp item, use controls - Standing, forward bending, reaching over, stooping, crouch, squat
SUSTAINED RISK FACTORS	- Moderate sustained gripping of items to be recycled when carrying - Elbow held in a static flexed position during carrying - Standing
REPETITIVE RISK FACTORS	- Constant flexion of hip, knee and ankle joints to squat and stand - Frequent stepping to turn and change directions - Constant shoulder, elbow flexion/extension and hand gripping to carry rubbish
RISK INJURY AREAS	- Back muscles and spine structures - if fail to use legs (i.e. bend at hips, knees and ankles) to lower body and reach lower items - Knees and back if twisting occurs - Shoulder cumulative injury due to repeated tasks requiring use of force whilst positioned in various degrees of flexion and abduction, protracted in relation to spine i.e. reaching into containers/bailer - Shoulders and wrists - if poor technique using upper body strength to perform movements rather than body weight and leg strength - Hands, wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm take the load – leading to fatigue and strain or sprain - Shoulder injury if uncontrolled twisting or repeated cross centreline reaching. Both of these lead to increased risk of impingement
MODIFICATIONS	- Regular re-set stretches and postural exercises - Use of safety step in event that opening of bailer or reaching requires above shoulder height hand movement - Ambidextrous use of upper limbs maintaining neutral joint postures to reduce internal rotation of shoulder and risk of impingement - Maintain neutral spine at all times. Lift items using lower limb muscles more than upper and spinal musculature - Keep body as close to task as possible, lean hips onto bailer if safe to reduce pressure on postural muscles - Stand with joints in slight flexion. - If transporting rubbish or bail anywhere use aids/equipment i.e. fridge trolley. If necessary, use two handed carry and move feet to face direction of travel to avoid twisting of knees and spinal structures - Correctly fitting gloves – poorly fitting gloves result in greater muscle use to grip rubbish and trolley, and muscles fatiguing faster
ENVIRONMENTAL FACTORS	Surface that the trolley must be moved across can alter the amount of force required to perform task. Rough surfaces and sloped surfaces also demand that more force is to be applied to achieve correct direction of trolleys. Weather and temperature may play a role in determining susceptibility to injury creating varied conditions for cleaners to work in – e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration.
OTHER FACTORS	Weight of rubbish and amount placed in bailer, and then moved on trolley will alter how much force is required. Also staffing numbers – if there is more than one person to share the load then there is less risk of fatigue and injury. Finally, work pace – if rushing there is a greater likelihood of mistakes being made and injury occurring.

JOB TASK ANALYSIS RE-FUEL VEHICLE

PHYSICAL DEMAND	Light - Medium
MOVEMENTS	• Bilateral lower limb coordination to stand, walk and turn. • Varying range of hip flexion and knee flexion and extension. Ankle dorsiflexion and plantar flexion. (At times under load) • Cervical flexion with rotation, extension. • Shoulder flexion bilateral. Some shoulder abduction with degree of rotation - at times under load. • Elbow flexion and extension - at times under load. • Forearm pronation and supination, wrist neutral. • Flexion and extension of thumbs and fingers as required to grasp hose. • Standing, standing, stooping - depending on height of fuel canister, fuel cap, fuel hose.
SUSTAINED RISK FACTORS	• Finger and thumb flexion to grip handle. • Standing/stooping • Squatting – hip flexion, knee flexion and dorsiflexion of ankle. • Cervical flexion, rotation or extension.
REPETITIVE RISK FACTORS	• Constant shoulder flexion, abduction, adduction and rotation. • Constant elbow flexion, extension, pronation and supination. • Constant wrist flexion, extension, radial and ulnar deviation. • Frequent hip and knee flexion/extension, ankle dorsiflexion and plantar flexion.
RISK INJURY AREAS	• Back muscles and spine structures if fail to use legs (i.e. bend at hips, knees and ankles) to lower body and reach lower down, i.e. with flexed rather than neutral spine. • Knees and spine if feet facing different way to trunk and upper limbs (twisting). • Shoulder injury if uncontrolled twisting or repeated cross centreline reaching. Both of these lead to increased risk of impingement. • Neck due to sustained positioning and use of associated upper limb/shoulder muscles - leads to poor blood flow and increased risk of strain, sprain and muscle cramp. • Hands, wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm support entire load. • Chemical exposure.
MODIFICATIONS	• Regular re-set stretches and postural exercises. • Work with upper arms at sides of body, only allowing small flexion movements to reduce reaching and torque on spine and shoulders. Turn with feet, not just reaching with arms. • Maintain neutral spine at all times. Use lower limb joints (hip, knee and ankle) to position body i.e. squat • Stand with joints in slight flexion. • Lift items, e.g. fuel can, using lower limb muscles more than upper and spinal musculature. • Use a gentle controlling power grip (whole hand) rather than pinch grip (fingers only) when grasping.
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury – e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration. Length of sustained posture, posture required, and overall physical demand (level of force, movement repetition) will vary based on the size of the tank, speed of the pump, number of vehicles to be refuelled, use of automatic pump versus fuel can and funnel.
OTHER FACTORS	Physical factors such as height, strength, flexibility and fitness will alter likelihood of an incident occurring.

JOB TASK ANALYSIS REPAIR FOOTPATH

PHYSICAL DEMAND	Medium
MOVEMENTS	• Shoulder flexion and abduction plus rotation • Elbow flexion and extension • Forearm pronation and supination • Wrist extension • Finger flexion and extension • Walking / squatting / lunging / stooping / crouching / kneeling • Hip flexion and extension • Knee flexion and extension • Ankle dorsiflexion and plantar flexion
SUSTAINED RISK FACTORS	• Kneeling (or other working position) • Hip and knee flexion, ankle plantar flexion and dorsiflexion • Cervical spine flexion
REPETITIVE RISK FACTORS	• Shoulder flexion and extension, abduction and adduction, external and internal rotation • Elbow flexion/extension, pronation, supination • Finger flexion and extension • Cervical spine rotation
RISK INJURY AREAS	• Back muscles and spine structures if perform task with flexed spine rather than maintaining neutral spine. • Kneeling (or other working position) with bricks (or other materials for repair) to the side and having to twist to retrieve them. Knee, back, hip, shoulder joints and muscles are susceptible to injury from twisting. • Neck due to sustained flexion, leads to poor blood flow and increased risk of strain, sprain and muscle cramp.
MODIFICATIONS	• Regular re-set stretches and postural exercises • Maintain neutral spine at all times. • Keep body as close to task as possible, with all materials and equipment prepared and set up in easy reach.
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury – e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration.
OTHER FACTORS	Length of sustained posture and movement repetition will vary based on the size of area of footpath to be repaired.

JOB TASK ANALYSIS RINSE CROCKERY & CUTLERY

PHYSICAL DEMAND	Medium
MOVEMENTS	• Bilateral lower limb coordination to stand, step and turn. • Hip flexion, extension, knee flexion and extension. Ankle dorsiflexion and plantar flexion. • Sustained cervical flexion and rotation. • Shoulder flexion and abduction/ adduction combined with varied degree of rotation. • Neutral wrist position with slight extension, radial and ulnar deviation. • Elbow flexion and extension plus forearm pronation and supination. • Flexion and extension of thumbs and fingers as required to grip. • Moderate abdominal and spinal muscle contraction for stability. • Sustained standing.
SUSTAINED RISK FACTORS	• Standing posture with neck flexion. • Sustained gripping - finger flexion. • Abdominal and spinal muscle contraction for stability.
REPETITIVE RISK FACTORS	• Frequent/constant finger flexion and extension plus wrist movement for gripping. Combined with finger adduction. • Constant elbow full ROM, forearm pronation and supination. • Frequent weight shift from foot to foot, hip flexion and extension (small range). • Occasional ankle dorsiflexion and plantar flexion. • Frequent knee flexion and extension plus lower limb muscle activation - walking short distances, changing direction between equipment
RISK INJURY AREAS	• Spine if fail to use legs (i.e. bend at hips, knees and ankles) to lower body and reach lower items. • Back muscles and spine structures if perform any part of task with flexed spine. • Knees and backs if feet facing different way to trunk. Joints and muscles are susceptible to injury in situations of twisting. • Hands, wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm take the load – leading to fatigue and strain or sprain. • Neck due to sustained flexion, with upper limb muscle activity leading to poor blood flow and increased risk of strain, sprain and muscle cramp. • Shoulder cumulative injury due to repeated tasks requiring use of force in flexion and abduction, protracted in relation to spine. • Shoulder injury if uncontrolled twisting or repeated cross centreline reaching. Both of these lead to increased risk of impingement.
MODIFICATIONS	• Encourage residents to empty plates and stack dishes/cutlery after their meal, reducing repetitious handling by Kitchen staff. • Tap and hose should be positioned so that all staff are able to hold trigger/tap and direct spray without having to stoop or reach. • Lever to start water flow should require minimal force to activate. • Stand with joints in slight flexion. Take regular posture break, re-set stretches and exercises. • Grip should be well below shoulder height to reduce torque on spine and shoulders. Keep task between hips and shoulders. • Ambidextrous use of upper limbs maintaining neutral joint positioning of the arm/hand. Alternate between using right and left hand. • Maintain neutral spine at all times. • Keep body as close to task as possible, lean hips onto side of trough/sink to reduce pressure on postural muscles. • Use a gentle controlling not heavy grip on the hose.
ENVIRONMENTAL FACTORS	Length of sustained posture, posture required, and overall level of force and movement repetition will vary based on the trough type and size, plus tap and hose dimensions. Weather and temperature may play a role in determining susceptibility to injury creating varied conditions for staff to work in – e.g. cold can lead to reduced circulation so increased joint stiffness, whereas heat may lead to higher level of dehydration.
OTHER FACTORS	Daily repetitions of an action will be determined both by job rotation amongst staff members, camp capacity (i.e. volume of meals served), and type of food stains on crockery and cutlery. Temporal and behavioural factors such as pressure to rush can increase injury risk. Finally physical factors such as height, strength, work hardening and fitness will alter likelihood of an incident occurring.

JOB TASK ANALYSIS RUN GROUP FITNESS CLASS / STRETCHES

PHYSICAL DEMAND	Light - Heavy
MOVEMENTS	- Plantarflexion and dorsiflexion of the ankle, Knee flexion and extension, Hip flexion, extension, abduction and adduction - at times under load or to exert force - Lumbar flexion and extension - Neck flexion, extension, lateral flexion and rotation. - Shoulder flexion, extension, abduction, adduction, protraction, retraction and rotation - at times under load or to exert force - Elbow flexion and extension, Forearm pronation and supination - at times under load or to exert force. - Wrist flexion and extension, Radial and ulnar deviation - at times under load or to exert force. - Flexion and extension of thumbs and fingers as required for grasping item with moderate intensity. - Standing, walking, lunging, running, jumping, pulling and pushing, stretching, demonstrating any physical skills/exercises
SUSTAINED RISK FACTORS	Standing
REPETITIVE RISK FACTORS	- Repetitive squatting, lunging, running, jumping, pulling and pushing movements - Sudden lateral movement. - Frequent shoulder flexion, abduction, adduction, protraction, retraction and rotation. - Frequent elbow flexion, extension, pronation and supination. - Frequent wrist flexion, extension, radial and ulnar deviation. - Frequent hip flexion and extension. - Frequent knee flexion and extension. - Frequent ankle plantarflexion and dorsiflexion.
RISK INJURY AREAS	- Ankle, knee and wrist injuries from tripping or falling - Lower limb strain injuries from over stretching during eccentric phase of muscle contraction. - Lower limb joint/strain injuries from performing weight bearing exercises under load. - Upper limb joint/strain injuries from performing weight bearing exercises under load. - Spinal injuries from fatiguing integral postural muscles, using poor technique.
MODIFICATIONS	- Warm-up and stretch before classes and sporting events - Implement strategies to reduce physical workload such as demonstrating exercise to a group rather than individually. - Wear appropriate footwear during classes/events. Running shoes in most cases but also may include work boots and aquatic shoes. - Ensure equipment is fault-free prior to commencing. - Work within your physical limitations and be mindful of fatigue. Take frequent rest breaks and stay hydrated. - Maintain a neutral spine where possible. Use proper manual handling including team lifts and mechanical aides if necessary when setting up class. - Stretch after class.
ENVIRONMENTAL FACTORS	- Heat and exposure; rain and lightning for outdoor classes/events. - Slippery surfaces around pool areas. - Congestion inside gym. - Pests/wildlife
OTHER FACTORS	Physical demand will vary depending on nature of group class: information session, training/education, stretches, strengthening exercises, sporting game/competition, pre-start stretches.

JOB TASK ANALYSIS SCRUB POTS & PANS

PHYSICAL DEMAND	Medium - Heavy
MOVEMENTS	- Sustained standing. - Hip flexion, extension, knee flexion and extension. Ankle dorsiflexion and plantar flexion. - Cervical flexion, and rotation. - Shoulder flexion unilateral – sustained. Shoulder abduction/ adduction combined with varied degree of rotation. - Wrist flexion, extension, radial and ulnar deviation. - Elbow flexion and extension plus forearm pronation and supination. - Flexion and extension of thumbs and fingers as required to grip moderately forcefully. - Moderate abdominal and spinal muscle contraction for stability.
SUSTAINED RISK FACTORS	- Prolonged standing posture with neck flexion. - Sustained gripping of a cleaning tool with - finger flexion. - Abdominal and spinal muscle contraction for stability.
REPETITIVE RISK FACTORS	- Constant finger flexion and extension plus wrist movement for gripping combined with finger adduction. - Constant elbow full ROM, forearm pronation and supination. - Frequent weight shift from foot to foot, hip flexion and extension (small range). - Occasional ankle dorsiflexion and plantar flexion. - Frequent knee flexion and extension plus lower limb muscle activation to lift and lower items.
RISK INJURY AREAS	- Neck, back, shoulder, elbow, wrist and hand/finger strains if maintain poor joint positioning and manual handling when performing standing upper limb activities for long periods and repetitively. - Hands, wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm take the load – leading to fatigue and strain or sprain. - Back muscles and spine structures if perform any part of task with flexed spine and without bending at hips, knees and ankles. - Knees and backs if feet facing different way to trunk. Joints and muscles are susceptible to injury in situations of twisting. - Neck due to sustained flexion, with upper limb muscle activity leading to poor blood flow and increased risk of strain, sprain and muscle cramp. - Shoulder cumulative injury due to repeated tasks requiring use of force whilst positioned in various degrees of flexion and abduction, protracted in relation to spine. - Shoulder injury if uncontrolled twisting or repeated cross centreline reaching. Both of these lead to increased risk of impingement.
MODIFICATIONS	- Pre-start warm up and regular posture breaks and reset stretches. - Encourage a kitchen policy of "if you burn it you clean it" – so that items are cleaned quickly after it occurring, and to discourage the burning from occurring. - Kitchens should have a pot wash station, or specific machine such as a pot soaker to reduce manual labour required. - Maintain neutral spine at all times. Sink lifter in bottom of sink or higher trough to reduce stooping when reaching into bottom of a pot or bottom of the sink. - Use ergonomically appropriate tool that allows for efficient hand position and gripping – power grip/working hand position. - Chemical dispenser, tap and hose should be positioned so that staff can hold and direct it without having to stoop or reach. Use of chemicals and soaking to soften food residue. - Ambidextrous use of upper limbs maintaining a neutral wrist position. Alternate between using right and left hand. - Keep body as close to task as possible, lean hips onto side of trough/sink to reduce pressure on postural muscles. Always move feet when turning, do not position upper body and feet facing different ways.
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury– e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration. Length of sustained posture and overall level of force and movement repetition will vary based on the design and size of the kitchen, types of dish-washing machines and trough/sinks available.
OTHER FACTORS	Repetitions and force required for the task will be determined both by length of time rostered to pot wash, state of the pots and pans, quality of tools, chemical used and efficiency of kitchen staff to clean and prepare food during busy service times. Effect on staff will depend on physical factors such as strength, flexibility, and level of work hardening.

JOB TASK ANALYSIS STOCK ROTATION

PHYSICAL DEMAND	Light - Heavy
MOVEMENTS	- Bilateral lower limb coordination to squat, stand, walk and turn. - Hip and knee flexion and extension plus ankle plantar and dorsiflexion to lower body relative to item. - If unable to use lower limbs to get closer to item use of leg and arm movement, to slide items closer to trunk. - Activation of spinal stabilising and abdominal muscles. - Bilateral movement of upper limbs to manipulate cutting tool, remove plastic, then to grasp item – shoulder flexion, extension, and possibly abduction. - Sustained elbow flexion and supination. - Use of leg muscles and gluteals under load to stand and lift item.
SUSTAINED RISK FACTORS	Spinal and abdominal muscle activation for stability.
REPETITIVE RISK FACTORS	- Constant cervical flexion, extension and rotation. - Constant shoulder flexion, extension, abduction, and adduction with varying degrees of rotation. - Constant elbow flexion and extension. - Constant forearm supination and pronation. - Constant wrist flexion. - Constant finger abduction and adduction, flexion. - Frequent hip and knee flexion and extension. Ankle plantar and dorsiflexion.
RISK INJURY AREAS	- Sprain or strain of neck musculature and joints due to sustained muscle contraction linked with upper limb use and observation of hand movements. - Shoulder cumulative injury due to repeated tasks requiring use of force whilst positioned in various degrees of flexion and abduction, protracted in relation to spine. - Back and shoulder strains if using incorrect procedure such as standing still and twisting – creating torsion at the joint and increasing likelihood of damage. - Back if poor activation of spinal stabilising muscles. - Shoulders and wrists if poor procedure – using upper body strength to perform movements rather than body weight and leg strength. - Forearm, hand and wrist structure strain if use inefficient grip on item.
MODIFICATIONS	- Pre-start warm up - Regular re-set stretches performed to reduce muscle tension, and pressure placed on joints – therefore reducing likelihood of cumulative injury. - Move feet and use legs to position body so that trunk/torso is facing work area or item and twisting is avoided. - Use legs to lift and bodyweight to slide item. - Ensure there is clear communication and that floors are cleared in storage area.
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury creating varied conditions for staff to work in – e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration.
OTHER FACTORS	Length of sustained posture and overall level of force and movement repetition will vary based on the way a pallet has been packed (if heavy items are high or low). It will also vary depending on type of item being unloaded. Daily repetitions of an action will be determined both by number of items to be offloaded and staff resources to share the job.

JOB TASK ANALYSIS STOCK SHELVES / COOL ROOMS / FREEZERS

PHYSICAL DEMAND	Light - Heavy
MOVEMENTS	• Bilateral lower limb coordination to squat, stand, walk and turn. • Hip and knee flexion and extension. Ankle dorsiflexion and plantar flexion. • Contraction of arm and leg muscles under load for lifting and lowering. • Cervical flexion, extension, and rotation • Slight shoulder flexion bilateral or unilateral – sustained. Shoulder abduction/adduction with rotation. • Elbow flexion and extension for lifting and lowering, with forearm supination. • Wrist in neutral, muscles stabilising. • Flexion and extension of thumbs and fingers. • Moderate abdominal and spinal muscle contraction for stability.
SUSTAINED RISK FACTORS	• Spinal and abdominal muscle activation for stability.
REPETITIVE RISK FACTORS	• Cervical flexion, extension and rotation. • Shoulder flexion, and extension, abduction, and adduction, combined with varying degrees of rotation. • Elbow flexion and extension. With forearm supination and pronation. • Finger and thumb adduction and flexion. • Lower limb movement and muscle activation. • Hip and knee flexion and extension. • Ankle plantar and dorsiflexion.
RISK INJURY AREAS	• Back, shoulders, wrists, elbows and shoulder strains if maintain poor posture when performing standing and reaching activities. • Spine if fail to use legs (i.e. bend at hips, knees and ankles) to lower body and reach lower items. • Back muscles and spine structures if perform any part of task with flexed spine rather than maintaining neutral spine. • Knees and backs if feet facing different way to trunk. Joints and muscles are susceptible to injury in situations of twisting. • Shoulder cumulative injury due to repeated tasks requiring use of force whilst positioned in various degrees of flexion and abduction, protracted in relation to spine. • Shoulders and wrists if poor technique – using upper body strength to perform movements rather than leg strength. • Hands, wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm take the entire load – leading to fatigue and strain or sprain. • Shoulder injury if uncontrolled twisting or repeated cross centreline reaching. Both of these lead to increased risk of impingement.
MODIFICATIONS	• Pre-start warm up. • Regular re-set stretches and postural exercises. • Keep the task at approximately waist level, or appropriate working height, such as: • If reasonable place pallet or boxes on pallet jack or scissor trolley, and raise or lower this so that it is at the same height as the designated shelf destination. • Use of safety step in event that designated shelf is higher than shoulder height. • Use lower limb joints (hip, knee and ankle) to position body so that neutral spine can be maintained. • Keep body as close to task as possible, lean hips onto shelf, or move feet into step stance– to reduce demands on postural muscles. • Activate core musculature to stabilise at spine and have knees and elbows in slight flexion to reduce risk of twisting sprain/strain. • Lift items using lower limb muscles more than upper body and spinal musculature. • Correctly fitting gloves – poorly fitting gloves result in greater muscle use to hold items and muscles fatiguing faster.
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury e.g. cold (cool rooms, freezer) can lead to increased joint stiffness whereas heat may lead to higher level of dehydration.
OTHER FACTORS	Overall level of force and movement repetition will vary based on the way a pallet or box has been packed (if heavy items are stored too high, or items tightly packed) and the amount of space available in which to unload/load, manoeuvre equipment. It will also vary depending on type of item being unloaded. Daily repetitions of an action will be determined both by number of items to be offloaded and staff resources to share the job. Temporal factors will alter how staff move when performing the task, pressure to move faster can lead to behavioural changes – rushing and increasing risk of injury. Physical factors such as height, strength and fitness may influence likelihood of an incident occurring.

JOB TASK ANALYSIS STOCK ICE WELLS

PHYSICAL DEMAND	Medium
MOVEMENTS	- Reaching and grasping: shoulder flexion, extension, shoulder abduction, adduction. Plus varying degrees of rotation. Under varying loads. - Elbow flexion and extension. - Forearm pronation and supination. - Wrist full ROM. - Finger flexion and extension. - Bilateral lower limb coordination. - Hip flexion and extension, knee flexion and extension. - Ankle dorsiflexion and plantar flexion. - Forward bending or stooping, crouching, squatting, often under load.
SUSTAINED RISK FACTORS	- Standing - Cervical flexion
REPETITIVE RISK FACTORS	- Constant finger flexion and wrist movement for gripping bottles, buckets, ice scoop and containers, under load. - Frequent elbow full ROM, Forearm pronation and supination. - Frequent wrist full ROM. - Constant weight shift from foot to foot, hip flexion and extension (small range). - Ankle dorsiflexion and plantar flexion. - Constant knee flexion and extension plus lower limb muscle activation.
RISK INJURY AREAS	- Knees, shoulders and spinal structure. Joints and muscles are susceptible to injury when twisting, flexed, and when under load. - Shoulder injury if uncontrolled twisting or repeated cross centreline reaching. Both of these lead to increased risk of impingement.
MODIFICATIONS	- Maintain neutral spine at all times. - Keep body as close to task as possible, lean hips onto bench when stocking well with bottles – to reduce demands on postural muscles. - Keep joints, e.g. hips, knees, in slight flexion. - Lift items using lower limb muscles more than upper and spinal musculature. - Perform floor to bench lifts using both hands. - Avoid using hands to move ice from bucket into well – cold and wet environments increase susceptibility to abrasion and strains. - Use mechanical aids and equipment where possible, e.g. trolleys to eliminate carrying stock or ice buckets. - Plan and prepare for loading, re-stocking and emptying of ice wells – consider environment set up (fixed or mobile ice wells?) and equipment available to minimise need for manual handling.
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury creating varied conditions for workers – e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration. Floor surface is another factor that can alter fatigue of muscles, pressure on joints and other structures, therefore susceptibility to work related musculoskeletal injury.
OTHER FACTORS	Length of sustained posture and overall level of force and movement repetition will vary based on shift requirements – busier times of day or busier nights require more stock rotation and re-stocking of wells.

JOB TASK ANALYSIS STRIP AND SEAL FLOORS

PHYSICAL DEMAND

Medium

MOVEMENTS

- Bilateral lower limb coordination to stand, walk and turn.
- Moderate range of hip flexion, extension, knee flexion and extension. Ankle dorsiflexion and plantar flexion. At times under load to propel buffing machine
- Cervical flexion, and rotation.
- Shoulder flexion bilateral with abduction/adduction and some rotation. At times under load to control buffing machine
- Elbow flexion and extension. Concentric and eccentric control required.
- Wrist in neutral, forearm and hand muscles active to grip the buffing machine – finger flexion.
- Forearm pronation and supination.
- Flexion and extension of thumbs and fingers as required to grasp item.
- Moderate abdominal and spinal muscle contraction for stability.

SUSTAINED RISK FACTORS

- Standing.
- Cervical flexion.
- Shoulder in slight abduction and flexion.
- Wrist in neutral – stabilised by forearm muscles.
- Finger flexion to grip buffing machine.

REPETITIVE RISK FACTORS

- Constant hip and knee flexion and extension.
- Frequent hip abduction and adduction.
- Frequent ankle flexion and plantar flexion.

RISK INJURY AREAS

- Back, shoulders, wrist and elbow strains if poor posture/manual handling is maintained and when performing the task for extended periods of time.
- Spine if legs not used to lower body when picking up and placing down containers of chemicals. Increased risk of strain and sprain if task is performed with flexed or overextended spine.
- Knees and back if feet orientated in a different way to trunk. Joints and muscles are susceptible to injury with twisting.
- Neck due to sustained flexion, elongation of spinal muscles leads to poor blood flow and increased risk of injury.
- Wrist, elbow and shoulder strains if using incorrect procedure such as standing still and moving the buffing machine using arms, rather than holding steady at the hips and moving the machine using the legs.
- Hands, wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm take the entire load – leading to fatigue and strain or sprain.

MODIFICATIONS

- Regular re-set stretches and postural exercises.
- Use lower limb joints (hip, knee and ankle) to position body so that neutral spine can be maintained.
- Clear environment before starting task (i.e. remove furniture). Seek assistance if moving heavy items prior to cleaning.
- Keep the handles of the buffing machine as close as possible to the body to minimise load on the arms and shoulders.
- Activate core musculature to stabilise at spine and reduce risk of twisting sprain/strain.
- Lift items using lower limb muscles more than upper and spinal musculature.
- Use a gentle controlling not heavy grip on the buffing machine handles.
- If transporting stripping and buffing chemicals anywhere use two handed carry and move feet to face where placing it so that no injurious twisting of knees and spinal structures occurs.
- Correctly fitting gloves – poorly fitting gloves result in greater muscle use to grip items and muscles fatiguing faster.
- Use power grip (whole hand) rather than pinch grip (fingers only).

ENVIRONMENTAL FACTORS

Room layout, size of floor space, temperature, and furniture/obstacles will alter position and range of joint movement demanded, as well as tissue susceptibility to injury.

OTHER FACTORS

Temporal factors will alter how staff move when performing the task, pressure to move faster can lead to behavioural changes – rushing and increasing risk of injury. Staff individual physical features will also impact risk. Fitter, stronger staff will be less affected by force required – as muscles will not fatigue as quickly. Height of staff will alter what range of movement is required to perform task with correct posture.

JOB TASK ANALYSIS STUMP GRINDING

PHYSICAL DEMAND	Light - Medium
MOVEMENTS	• Sustained standing. • Elbow flexion and extension • Shoulder flexion, extension, abduction and adduction • Forearm pronation and supination • Gripping - finger, wrist, elbow flexion/extension, radial/ulnar deviation - while exerting force. • Finger manipulation of controls
SUSTAINED RISK FACTORS	• Standing • Spinal and abdominal muscle activation for stability. • Shoulder flexion, extension, abduction and adduction • Elbow flexion • Power grip – flexion of fingers and thumbs • Forearm pronation • Slight cervical flexion to observe task
REPETITIVE RISK FACTORS	• Wrist flexion, extension, radial and ulnar deviation. • Finger manipulation
RISK INJURY AREAS	• Lower Back, hips, knees – with long periods spent standing on hard surface, especially if poor posture is maintained. • Wrist cumulative degeneration from sustained gripping, frequent movements, and effects of vibration.
MODIFICATIONS	• Regular re-set stretches and postural exercises to return spine to neutral and lengthen muscles that tighten over time • Position body in front of controls rather than stand side on to prevent twisting spine. • Take brief, regular breaks if task is to be undertaken over a long period of time.
ENVIRONMENTAL FACTORS	Effects of temperature can increase likelihood of injury – heat leading to dehydration, cold can lead to poor circulation.
OTHER FACTORS	The size of the stump will determine length of sustained posture. Larger stumps can take up to 90 minutes to grind so regular breaks or rotation would be beneficial.

JOB TASK ANALYSIS SWEEP EXAMPLES BROOM, FRINGE MOP, DUSTPAN AND BRUSH

PHYSICAL DEMAND	Medium
MOVEMENTS	• Cervical flexion and extension combined with varying degrees of rotation. • Bilateral and unilateral shoulder flexion, extension, abduction, and adduction. This is generally also combined with some degree of rotation of both arms. • Elbow flexion and extension. • Forearm pronation and supination. • Wrist extension and flexion, radial and ulnar deviation. • Finger flexion and extension. • Hip flexion and extension. • Knee flexion and extension. • Ankle dorsiflexion and plantar flexion. • Occasional stooping, forward bending, crouching or squatting
SUSTAINED RISK FACTORS	• Standing posture. • Cervical flexion. • Sustained gripping of equipment handle with clasped hands - finger and thumb flexion.
REPETITIVE RISK FACTORS	• Repeated postures/actions due to movement patterning on dominant side • Constant bilateral shoulder flexion, extension, abduction and adduction. • Constant small arm movements - elbow flexion and extension plus forearm pronation and supination. • Frequent wrist extension, radial and ulnar deviation. • Frequent hip and knee flexion and extension. • Frequent ankle dorsiflexion and plantar flexion.
RISK INJURY AREAS	• Neck due to sustained flexion. • Wrist, elbow and shoulder strains - if using incorrect techniques such as standing still and sweeping using arms, rather than holding the broom and walking for broom propulsion; or pulling rather than pushing the broom • Back strain - if twist spine rather than using legs and feet to create momentum behind broom. • Pressure injury (neural, bruising or blisters) if broom held with palm of hand on tip of broom.
MODIFICATIONS	• Always hold the broom with both hands below shoulder height. • Long broom handles used for all so that appropriate for staff of all heights. • Use a light but controlling grip on handles, as a heavy grip may lead to fatigue in arm musculature. • Minimise arm movement, preferably by using the legs/ walking to move the broom. • Maintain neutral spine position at all times when performing task. • Regular re-set stretches and alternate sides to reduce loading of joints.
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury creating varied conditions for workers – e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration. Surface type will also affect the amount of pressure to be applied – e.g. vinyl is easier than carpet.
OTHER FACTORS	Daily repetitions of an action will be determined both by number or size of floors cleaned and efficiency of technique.

JOB TASK ANALYSIS USE BOBCAT OR FORKLIFT

PHYSICAL DEMAND	Light
MOVEMENTS	• Single leg weight bearing capability – to get into/out of forklift or bobcat • Hip & knee flexion • Prolonged sitting • Lumbar and cervical flexion and full range rotation • Shoulder flexion, internal and external rotation, some abduction. • Elbow flexion and extension, pronation/supination • Sustained grip • Ankle dorsiflexion and plantar flexion. • Wrist flexion, extension, and radial and ulnar deviation. • Hand/finger manipulation
SUSTAINED RISK FACTORS	• Gripping • Sitting - Hip and knee flexion, lumbar flexion • Shoulder flexion and abduction • Postural muscle activity – to counteract/compensate for bobcat movement over terrain
REPETITIVE RISK FACTORS	• Occasional single leg weight bearing and propulsion to get into/out of bobcat. • Frequent shoulder internal/external rotation. • Frequent flexion and extension of elbows, pronation, supination • Frequent wrist flexion and extension, ulnar and radial deviation • Hand/finger manipulation of controls • Cervical rotation
RISK INJURY AREAS	• Neck/Back muscle and spine structures – joints and musculature with sustained muscle activity in flexion, some rotation, prolonged sitting and potential for vibration and impact stress/jolting over rough terrain. • Hip and knee strain or sprain – both with twisting when getting into bobcat and sustained flexed positioning. • Shoulder strain – joint and muscle – with repeated small rotation movements with arm in protracted position. • Whole-body exposure to vibration
MODIFICATIONS	• Regularly schedule and take posture breaks, movement and re-set stretches to reduce risk of injury from tight muscles. • Ensure adequate maintenance of forklift /bobcat seats and general mechanics.
ENVIRONMENTAL FACTORS	Surface type will affect vibration that a person is subjected to – rougher terrain will lead to greater jarring on the body. Weather and temperature may play a role in determining susceptibility to injury – e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration.
OTHER FACTORS	Length of sustained posture will be determined by amount of driving required.

JOB TASK ANALYSIS USE CAN OPENER

PHYSICAL DEMAND	Medium
MOVEMENTS	• Reaching and grasping: • Shoulder flexion, extension, abduction, adduction with varying degrees of rotation • Elbow flexion and extension • Forearm pronation and supination • Finger flexion and extension • Gripping and pinching • Neck extension / flexion • Standing
SUSTAINED RISK FACTORS	• Prolonged Standing • Cervical flexion • Postural muscle activation
REPETITIVE RISK FACTORS	• Moderately forceful finger / thumb gripping with forearm pronation and supination • Elbow flexion • Shoulder abduction and extension
RISK INJURY AREAS	• Hand, thumb, fingers • Forearm, and general upper limb • Back/ neck and shoulder, if failure to have poster breaks, movement and stretching
MODIFICATIONS	• Use electric can opener whenever possible • Maintain neutral spine and change stance frequently • Alternate hands if non dominate hand coordination allows • Take regular posture breaks, including movement and stretching • Ensure appropriate bench height • Stand close to task
ENVIRONMENTAL FACTORS	Room temperature may play a role in determining susceptibility to injury – e.g. cold can lead to reduced circulation and increased joint stiffness whereas heat may lead to higher level of dehydration.
OTHER FACTORS	Muscular exertions and movements are impacted by individual physicals features (such as height), hand motions, grip technique and posture as well as staffing/kitchen organisation e.g. task rotation and scheduling. The number of movements, time per action, and grip force are all impacted by the type and efficiency of the can opener.

JOB TASK ANALYSIS USE CHAINSAW

PHYSICAL DEMAND	Heavy
MOVEMENTS	• Forceful shoulder extension, abduction with elbow flexion and power grip to pull start. • Bilateral lower limb coordination to crouch, stand, step and turn. • Hip and knee flexion and extension. Ankle dorsiflexion and plantar flexion. • Cervical flexion, extension, and rotation. • Shoulder flexion and abduction/ adduction - at times under load • Elbow flexion and extension, pronation/supination - at times under load • Wrist flexion/extension, radial and ulnar deviation - at times under load • Flexion and extension of thumbs and fingers as required to grip handles with moderate force • Stand, stoop, crouch, kneel
SUSTAINED RISK FACTORS	• Grip – finger and thumb flexion combined with forearm pronation and supination - under load • Cervical flexion and rotation. • Elbow and shoulder flexion - under load • Standing or stooping • Hip and knee flexion with ankle plantar flexion if kneeling, crouching
REPETITIVE RISK FACTORS	• Frequent shoulder flexion, extension, abduction and adduction. • Frequent elbow flexion, extension, pronation and supination. • Frequent hip and knee flexion and extension, ankle dorsiflexion and plantar flexion.
RISK INJURY AREAS	• Back, shoulders, wrists, elbows and shoulder strains if maintain poor posture and manual handling techniques when standing or kneeling. • Back muscles and spine structures if fail to use legs (i.e. bend at hips, knees and ankles) to lower body to cut lower parts of the tree. • Knees and back if feet facing different way to upper body. Joints and muscles are susceptible to injury in situations of twisting. • Shoulder cumulative injury due to repeated movements requiring use of force to support weight of chainsaw - increases risk of impingement.
MODIFICATIONS	• Pre-start warm up. • Use lower limb joints (hip, knee and ankle) to position body so that neutral spine can be maintained. • Keep body as close to task as is safely possible rather than fully extending elbows to reduce demands on postural muscles. • Regular re-set stretches and postural exercises.
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury – e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration.
OTHER FACTORS	Size of tree/branch and location to be cut as well as volume of chain sawing required will determine whether worker will be required to stand or kneel and the length of time in sustained posture.

JOB TASK ANALYSIS USE CHIPPER / MULCHER

PHYSICAL DEMAND	Medium - Very Heavy
MOVEMENTS	• Bilateral coordination of lower limbs to approach log appropriately. • Hip and knee flexion and extension of varying degrees plus ankle plantar and dorsiflexion - under load • Forearm pronation and supination. • Elbow flexion and extension, Shoulder flexion and extension - under load • Flexion and extension of thumbs and fingers as required for grasping - under load • Cervical flexion, extension, rotation • Standing, squatting
SUSTAINED RISK FACTORS	• Standing • Gripping
REPETITIVE RISK FACTORS	• Frequent cervical flexion, extension and rotation. • Constant shoulder flexion and extension, abduction, and adduction • Constant elbow flexion and extension. • Frequent forearm supination and pronation. • Frequent wrist flexion. • Constant finger and thumb abduction, flexion and adduction • Frequent hip and knee flexion and extension, ankle plantar and dorsiflexion.
RISK INJURY AREAS	• Back muscles and spine structures - if poor manual handling techniques, i.e. fail to use legs (i.e. bend at hips, knees and ankles) to lower body. • Knees and back - if feet facing different way to upper body. Joints and muscles are susceptible to injury in situations of twisting. • Shoulders and wrists if poor technique – using upper body strength to perform movements rather than body weight and leg strength. • Hands, wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm take the entire load – leading to fatigue and strain or sprain.
MODIFICATIONS	• Pre-start warm up. • Use chainsaw to break down the load, rather than lift large logs. • Lift logs using lower limb muscles rather than upper and spinal musculature. Seek assistance. • Maintain neutral spine at all times. Use lower limb joints (hip, knee and ankle) to position body so that neutral spine can be maintained. • Keep joints in slight flexion and activate core musculature to stabilise at spine and reduce risk of twisting sprain/strain. • Perform regular re-set stretches. • Use a device to push log into chipper while maintaining upright with neutral spine rather than leaning into machine.
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury creating varied conditions for arborists to work in – e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration.
OTHER FACTORS	Physical demand varies dependent on size of log and relevant equipment used - large chipper or small mulcher for pruning waste. Size of log will determine whether a one or two person lift is required. If the log is too large it will need to be cut smaller with the chainsaw.

JOB TASK ANALYSIS USE PHONE/RADIO

PHYSICAL DEMAND	Light
MOVEMENTS	- Unilateral: - Shoulder flexion and extension. - Shoulder abduction and extension. - Elbow flexion and extension. - Forearm pronation and supination. - Wrist extension, radial and ulnar deviation. - Finger flexion and extension.
SUSTAINED RISK FACTORS	- Mildly sustained use of upper limb in one position whilst holding phone. - Elbow flexion. - Shoulder flexion. - Wrist extension, radial and ulnar deviation. - Finger flexion and extension. - Hip and knee flexion (if sitting), or sustained standing.
REPETITIVE RISK FACTORS	- Constant shoulder flexion and extension, abduction and extension. - Constant elbow flexion and extension. - Frequent forearm pronation and supination. - Constant wrist extension, radial and ulnar deviation. - Constant finger flexion and extension.
RISK INJURY AREAS	- Neck musculature - risk of strain, sprain or spasm with sustained, awkward positioning. - Shoulder musculature - with poor hand positioning.
MODIFICATIONS	- Use of mobile headset or speakerphone where possible. - Hold device close and in line with shoulder to minimise reach. - Hold phone with head straight. - Answer phone/radio with alternating hands where possible. - If information must be located or recorded during phone call, hold phone in non-dominant hand to allow dominant to write/type/use mouse.
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury, creating varied conditions for workers – e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration.
OTHER FACTORS	Length of sustained posture and overall level of force and movement repetition will vary based on the furniture type, nature of the role, e.g. desk/administrative duties vs. infrequent use of radio while in the field.

JOB TASK ANALYSIS USE FOOD SLICER

PHYSICAL DEMAND	Light
MOVEMENTS	• Bilateral lower limb coordination to stand, walk and turn. • Hip and knee flexion and extension. Ankle dorsiflexion and plantar flexion. • Cervical flexion, extension, and rotation • Shoulder flexion abduction/ adduction, combined with varied degree of rotation – at times under load • Elbow flexion and extension, forearm pronation and supination – at times under load • Flexion and extension of thumbs and fingers as required to grip equipment and/or food items. • Sustained standing
SUSTAINED RISK FACTORS	• Standing • Cervical flexion
REPETITIVE RISK FACTORS	• Frequent cervical rotation • Constant shoulder flexion, and extension combined with abduction and rotation • Constant elbow flexion and extension. • Frequent forearm supination and pronation. • Constant neutral wrist combined with finger and thumb flexion and adduction • Lower limb movement and muscle activation: • Hip and knee flexion and extension. • Ankle plantar and dorsiflexion.
RISK INJURY AREAS	• Back, shoulders, wrists, elbows and shoulder strains if maintain poor posture when performing standing upper limb activities. • Spine if fail to use legs (i.e. bend at hips, knees and ankles) to reach lower items. • Knees and backs if feet facing different direction to trunk. Joints and muscles are susceptible to injury in situations of twisting. • Neck due to sustained flexion whilst using upper limb muscles - elongation of spinal muscles leads to poor blood flow and increased risk of strain, sprain and cramp. • Shoulders and wrists if poor technique/posture • Shoulder injury if uncontrolled twisting or repeated cross centreline reaching. Both of these lead to increased risk of impingement.
MODIFICATIONS	• Slicer should be stored on height adjustable bench so that it can be adjusted to suit staff member's height and reduce posture related disorders. • Use trolley or other aid to transport food and/or equipment to preparation area. Use two-handed carry and move feet to face direction of travel so that no injurious twisting of knees and spinal structures occurs – particularly when under load. • Regular posture re-set stretches and exercises • Maintain neutral spine at all times • Keep body as close to task as possible, lean hips onto bench or stand in step stance– to reduce demands on postural muscles. • Stand with joints in slight flexion. • Lift items using lower limb muscles more than upper and spinal musculature. • Use leg joints evenly and adequately to lower body height and visually locate items rather than bending forwards or stooping
ENVIRONMENTAL FACTORS	Room layout, temperature, and furniture/equipment placement will alter position and range of joint movement demanded. If there is less space, movement will be more awkward, and joints will be placed at greater risk of strain. Effects of temperature can increase likelihood of injury – heat leading to dehydration and reduced health of body tissue, cold can lead to poor circulation to body tissue and reduced flexibility.
OTHER FACTORS	Temporal factors will alter how staff move when performing the task. Pressure to move faster can lead to rushing and increasing risk of injury. Staff individual physical features will also impact risk. Fitter, stronger staff will be less affected by force required – as muscles will not fatigue as quickly. Height of staff will alter what range of movement is required to perform task with correct posture.

JOB TASK ANALYSIS USE GLASS CRUSHER

PHYSICAL DEMAND	Medium
MOVEMENTS	- Reaching and grasping: Shoulder flexion, extension, shoulder abduction, adduction with varying degrees of rotation - Elbow flexion and extension - Forearm pronation and supination - Wrist full ROM - Finger flexion and extension - Bilateral lower limb coordination, including Hip flexion and extension, knee flexion and extension, Ankle dorsiflexion and plantar flexion
SUSTAINED RISK FACTORS	- Standing - Cervical flexion
REPETITIVE RISK FACTORS	- Moderately forceful finger flexion and wrist movement for gripping bottles, bin handles, gate latches/handles and crusher operating control - Elbow full ROM, Forearm pronation and supination - Wrist full ROM - Weight shift between feet, hip flexion and extension (small range) - Ankle dorsiflexion and plantar flexion - Knee flexion and extension plus lower limb muscle activation
RISK INJURY AREAS	- Knee joints and spine - if legs are not used correctly to turn resulting in twisting - Back and shoulders sprained or strained - if fail to activate core muscles and twist or flex spine rather than maintaining neutral spine - Shoulder injury - if uncontrolled twisting or repeated cross centreline reaching. Both of these lead to increased risk of impingement
MODIFICATIONS	- Glass is generally heavy and where bins are full, bins may be too heavy to move safely. - Maintain neutral spine. - Use appropriate trolley to assist when pushing glass wheelie bins. Keep handle of trolley/bin close to the torso when being pushed - Adequately plan path to the glass crusher. Gain assistance if path is known to have large slope or rough/loose surfaces - Activate core musculature to stabilise at spine and reduce risk of twisting sprain/strain - Drive movement and force applied to the wheelie bin through legs
ENVIRONMENTAL FACTORS	Glass crushers are generally placed outside, therefore weather and temperature may play a role in determining susceptibility to injury – e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration. Surface that the bins must be moved across can alter the amount of force required to perform task. Rough surfaces and sloped surfaces also demand that more force is to be applied to effectively move bin (see also Move/Empty Green Bins)
OTHER FACTORS	Noise and sharps exposure - appropriate PPE. Incorrectly fitting gloves can lead to increased force input when gripping and handling bottles, bins and operating controls.

JOB TASK ANALYSIS

USE OFFICE EQUIPMENT

EXAMPLES PHOTOCOPIER, LAMINATOR,
DOCUMENT BINDER, SCANNER, GUILLOTINE

PHYSICAL DEMAND	Light - Medium
MOVEMENTS	• Cervical spine rotation and flexion. • Thoracic and lumbar rotation. • Slight shoulder flexion bilateral or unilateral – sustained. Slight shoulder abduction/ adduction • Wrist radial/ulnar deviation. • Finger manipulation. • Bilateral lower limb weight bearing & walking. • Hip flexion and extension • Knee flexion and extension
SUSTAINED RISK FACTORS	• Finger flexion – sustained gripping of paper or equipment e.g. handle.
REPETITIVE RISK FACTORS	• Constant cervical and thoracic rotation and flexion. • Frequent shoulder flexion and extension with slight degree of abduction. • Occasional push/pull – elbow flexion, extension, pronation and supination to lift/lower. • Frequent finger flexion and adduction. • Frequent hip flexion, extension, knee flexion and extension.
RISK INJURY AREAS	• Cervical spine joints and musculature – strain or sprain risk with cumulative use. • Shoulders, wrists, elbows risk cumulative injury if maintain poor posture when performing upper limb activity • Spinal joints, discs and musculature if neutral spine position is not maintained. • Spine if fail to use legs – and don't bend at all lower limb joints during squat. • Knee and hip pain if weight is not balanced correctly. • Shoulder with inappropriate movement especially across the body and with internal rotation of the shoulder during reaching. • Knees and spine if twist during activity rather than moving feet to turn.
MODIFICATIONS	• Regular re-set stretches. • Boxes of paper stored at waist height so reduced pressure on joints in lifting and carrying box. • Palm grip – fingers and hands extended and adducted around object – to use strength of entire hand. • Avoid twisting during lifting; turn feet so point in direction intending to move. • Use leg joints evenly and adequately both during lift, carrying of item, and to lower body height relative to machine.
ENVIRONMENTAL FACTORS	Storage will determine where paper located and body movement required to access and move. Placement of machine will also affect what body position is required when using machine.
OTHER FACTORS	Temporal factors will alter how people move when performing task – urgency of task requirements often lead to people working faster and this can increase risk of injury. Repetition of movement will be determined by amount of photocopying required, and number of staff that can share the task.



JOB TASK ANALYSIS USE POLESAW

PHYSICAL DEMAND	Heavy
MOVEMENTS	- Forced shoulder extension with elbow flexion and power grip to pull start powered saw. - Bilateral lower limb coordination to crouch, stand, step and turn. - Hip and knee flexion and extension. Ankle dorsiflexion and plantar flexion. - Cervical flexion, extension, and rotation. - Shoulder flexion and abduction/ adduction - at times under load - Elbow flexion and extension, pronation and supination - at times under load - Wrist flexion/extension and radial and ulnar deviation - at times under load - Flexion and extension of thumbs and fingers as required to grip handles with moderate force.
SUSTAINED RISK FACTORS	- Grip – finger and thumb flexion combined with forearm pronation and supination - under load - Standing - Cervical extension and rotation. - Elbow and shoulder flexion and extension - under load
REPETITIVE RISK FACTORS	- Frequent shoulder flexion, abduction and adduction. - Elbow flexion, extension, pronation and supination. - Frequent hip and knee flexion and extension, ankle dorsiflexion and plantar flexion
RISK INJURY AREAS	- Back, neck, shoulders, wrists, elbows and shoulder strains if maintain poor posture or manual handling techniques during task. - Back muscles and spine structures if fail to use legs (i.e. bend at hips, knees and ankles) to pick up pole saw or when performing any part of task with flexed spine. - Knees and back if feet facing different way to upper body. Joints and muscles are susceptible to injury in situations of twisting. - Shoulder cumulative injury due to repeated movements requiring use of force. - Neck from prolonged extension to look at task. - Arm, neck and shoulder muscles from supporting weight of polesaw.
MODIFICATIONS	- Pre-start warm up. - Use lower limb joints (hip, knee and ankle) to position body so that neutral spine can be maintained. - Keep pole saw as close to body as possible (hands between hips and shoulders) rather than fully extending elbows to reduce demands on postural muscles. Use shoulder harness/strap to distribute weight of powered polesaw - Regular posture breaks, re-set stretches and exercises.
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury – e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration.
OTHER FACTORS	Select appropriate tools for the task - use powered saw rather than manual polesaw for thicker branches. Size of tree/branch to be cut will determine length of time in sustained posture. Height of tree/branch will determine force and body position required.

JOB TASK ANALYSIS USE RIDE ON MOWER

PHYSICAL DEMAND	Light
MOVEMENTS	• Single leg weight bearing capability – to get in/out • Hip & knee flexion • Prolonged sitting • Shoulder flexion, internal and external rotation • Elbow flexion and extension • Sustained grip • Ankle dorsiflexion and plantar flexion. • Wrist flexion, extension, and radial and ulnar deviation.
SUSTAINED RISK FACTORS	• Grip – finger flexion • Shoulder flexion and slight abduction • Postural muscle activity – to counteract/compensate for buggy movement over terrain • Hip and knee flexion
REPETITIVE RISK FACTORS	• Occasional single leg weight bearing and propulsion to get into and out of the mower. • Frequent flexion and extension of elbows • Frequent wrist flexion and extension, ulnar and radial deviation
RISK INJURY AREAS	• Cervical spine – joints and musculature with sustained muscle activity and potential for vibration and impact stress. • Hip and knee strain or sprain – both with twisting when getting into mower and sustained positioning. • Lumbar spine – cumulative injury with sitting combined with vibration and jolting over rough terrain. • Shoulder strain – joint and muscle – with repeated small rotation movements with arm in protracted position.
MODIFICATIONS	• Regular re-set stretches to ensure reduced risk of injury from tight muscles. • Ensure maintenance of ride on mower seats and general mechanics.
ENVIRONMENTAL FACTORS	Surface type will affect vibration that a person is subjected to – rougher terrain will lead to greater jarring on the body. Weather and temperature may play a role in determining susceptibility to injury creating varied conditions for gardeners to work in – e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration.
OTHER FACTORS	Length of sustained posture will be determined by area to be mowed.

JOB TASK ANALYSIS USE FLOOR SCRUBBER

PHYSICAL DEMAND	Light - Medium
MOVEMENTS	• Cervical flexion and rotation. • Hip and knee flexion and extension. Ankle dorsi/plantar flexion. • Moderate abdominal, back and gluteal contraction to propel and control machine • Flexion of all fingers and thumbs to grip. • Elbows flexed with small flexion and extension motions. • Shoulders held in slight flexion with small flexion/extension, adduction/ abduction, internal and external rotation motions.
SUSTAINED RISK FACTORS	• Grip on handle – flexion of fingers and activation of forearm muscles. • Shoulder, elbow stabilising musculature. • Abdominal and leg muscle contraction.
REPETITIVE RISK FACTORS	• Shoulder flexion. • Shoulder abduction and adduction. • Shoulder internal and external rotation. • Hand gripping. • Lower limb movement – hip and knee flexion and extension
RISK INJURY AREAS	• Knee joints and spine - if upper body is used to turn/change direction instead of legs, leads to greater twisting. Joints and muscles are susceptible to injury in situations of twisting. • Back and shoulders sprained or strained if fail to activate core muscles and twist or flex spine rather than maintaining neutral spine. • Shoulder injury if uncontrolled twisting or repeated cross centreline reaching. Both of these lead to increased risk of impingement.
MODIFICATIONS	• Maintain neutral spine. • Keep body close to floor scrubber throughout. • Adequately plan path to be cleaned. Gain assistance if need to move heavy furniture before cleaning. Lift items (e.g. chemicals, transporting scrubber) using lower limb muscles more than upper and spinal musculature. • Consider access to area for cleaning and transport of floor scrubber - use ramp to cross doorways with floor scrubber • Force applied through legs to propel and steer floor scrubber.
ENVIRONMENTAL FACTORS	Ground surface type will alter force requirements. Effects of temperature can increase likelihood of injury – heat leading to dehydration, cold can lead to poor circulation.
OTHER FACTORS	Physical features of the employee are important in reducing risk of injury – greater strength, flexibility and joint range of movement will reduce likelihood of injury. Quality and maintenance of equipment will also assist reducing force and time required to perform job.

JOB TASK ANALYSIS USE WHIPPER SNIPPER / BRUSH CUTTER

PHYSICAL DEMAND	Medium
MOVEMENTS	• Forceful shoulder extension, abduction with elbow flexion and power grip to pull start. • Bilateral lower limb coordination to stand, walk and turn. • Moderate range of hip flexion, extension, knee flexion and extension. Ankle dorsiflexion and plantar flexion. • Cervical flexion and rotation. • Slight shoulder flexion bilateral or unilateral – combined with rotation. • Elbow flexion and extension combined with forearm pronation and supination. • Flexion and extension of thumbs and fingers as required to grasp whipper snipper. • Stand, crouch, kneel
SUSTAINED RISK FACTORS	• Grip – finger and thumb flexion combined with ulnar rotation. • Cervical flexion and rotation. • Elbow flexion and neutral forearm rotation. • Moderate abdominal and spinal muscle contraction for stability. • Standing
REPETITIVE RISK FACTORS	• Frequent shoulder flexion, abduction and adduction. • Constant elbow flexion, extension, pronation and supination. • Constant wrist flexion, extension, radial and ulnar deviation. • Frequent hip and knee flexion and extension. • Frequent ankle dorsiflexion and plantar flexion.
RISK INJURY AREAS	• Spine structures and back muscles - if fail to use legs (i.e. bend at hips, knees and ankles) to lower body and reach lower items. • Knees and spine - if twisting trunk to move whipper snipper rather than feet. • Neck due to sustained flexion, elongation of spinal muscles leads to poor blood flow and increased risk of injury. Neck strain, sprain and muscle cramp. • Wrist, elbow and shoulder strains from shoulder muscle tension, and high tension grip. • Shoulder cumulative injury due to repeated internal and external rotation while shoulders protracted. • Shoulders and wrists if poor technique – using upper body strength to perform movements rather than body weight and leg strength.
MODIFICATIONS	• Whipper snipper should be worn on a harness so that upper limbs don't have to carry weight. • Regular maintenance of equipment will ease the cutting of the flora and reduce force required to perform task. • Move to get the hard to reach places by moving body and using legs. The whipper snipper should not be moved in an arc greater than 1m away from the body. • Use whipper snipper with arms close to side of body where possible to reduce excessive reaching and risk of impingement with sustained flexion and abduction of the shoulder. • Regular re-set stretches and postural exercises. • Ambidextrous use of upper limbs maintaining neutral joint positions. • Maintain neutral spine at all times. Use lower limb joints (hip, knee and ankle) to position body.
ENVIRONMENTAL FACTORS	Ground surface type and slope alters body position required to hold tool in correct position, greater slopes are more difficult to maintain a neutral, non-twisted spinal position. Effects of temperature can increase likelihood of injury – heat leading to dehydration, cold can lead to poor circulation to body tissue.
OTHER FACTORS	Physical features of the employee are important in reducing risk of injury – greater strength, flexibility and joint range of movement will reduce likelihood of injury. Quality and maintenance of tools will also assist reducing force and time required to perform job.

JOB TASK ANALYSIS VACUUM

PHYSICAL DEMAND	Medium
MOVEMENTS	- Bilateral lower limb coordination to stand, walk, lunge, squat and turn. - Moderate range of Hip flexion, extension, abduction, knee flexion and extension, ankle dorsiflexion and plantar flexion - at times under load. - Cervical flexion and rotation. - Shoulder extension/flexion (bilateral or unilateral) – small range of movement is sustained and/or repetitive. Slight shoulder abduction/adduction. - Unilateral/bilateral Wrist flexion, extension, radial and ulnar deviation. - Elbow flexion and extension: static, concentric and eccentric control required, at times under load - Forearm pronation and supination.. - Flexion and extension of thumbs and fingers to grasp equipment with moderate intensity. - Upper body (shoulder, neck), leg and back muscle activity under load (both for backpack-style vacuum and to push commercial carpet cleaner)
SUSTAINED RISK FACTORS	- Wrist extension and finger flexion – to grip vacuum hose or handle of commercial carpet cleaner. - Cervical flexion and rotation. - Shoulder flexion/extension, abduction and adduction with Elbow flexion/extension and pronation. - Standing
REPETITIVE RISK FACTORS	- Frequent shoulder flexion, abduction and adduction. - Constant elbow flexion, extension, pronation and supination. - Constant wrist flexion/extension, radial and ulnar deviation. - Constant gripping. - Constant hip and knee flexion, ankle dorsiflexion and plantar flexion - lunging, squatting, stepping.
RISK INJURY AREAS	- Back, shoulders, wrists, elbows and shoulder strains if maintain poor posture or manual handling techniques when performing standing, lifting and reaching activities. - Spine if fail to use legs (i.e. bend or stoop at hips, knees and ankles) to lower body and reach, e.g. under furniture. This increases risk of strain and sprain if task is performed with flexed or overextended spine rather than maintaining neutral spine. - Knees and backs if twisting (feet facing wrong way) when turning to vacuum certain areas. - Neck due to sustained flexion, elongation of spinal muscles leads to poor blood flow and increased risk of injury. - Wrist elbows and shoulders strains if using incorrect procedure such as standing still and vacuuming using arms, rather than holding the vacuum and walking for propulsion or using a lunge. - Shoulder cumulative injury due to repeated tasks requiring use of force whilst positioned in various degrees of flexion and abduction, protracted in relation to spine. - Shoulder injury if uncontrolled twisting or repeated cross centreline reaching. Both of these lead to increased risk of impingement. - Shoulder musculature with poor hand positioning.
MODIFICATIONS	- Clear environment before starting vacuuming to avoid having to bend over to get into hard to reach places (i.e. under furniture). Seek assistance if moving heavy items prior to cleaning. - Use lower limb flexion and squatting technique to plug vacuum in to power source. - Vacuum should be attached correctly if on a backpack set up. Both straps should be firmly secured. - Vacuum with arms close to side of body where possible to reduce risk of overreaching and impingement. - Vacuum within 1-2m radius of body. Minimise arm movement by using the legs to move the vacuum around, e.g. lunging, walking forwards or weight transfer between feet. - Regular re-set stretches and postural exercises - Maintain neutral spine at all times. Use lower limb joints (hip, knee and ankle) to position body so that neutral spine can be maintained. - Hold the handle/hose with both hands at waist height. - Use a gentle controlling not heavy grip on the equipment handle.
ENVIRONMENTAL FACTORS	Ground surface type and furniture in the room will alter the body position required to hold tool in correct position, some furniture and equipment is harder to clean around and requires more joint movement. Effects of temperature can increase likelihood of injury – heat leading to dehydration, cold can lead to poor circulation. Volume and frequency of vacuuming i.e. large work areas increases the physical demand.
OTHER FACTORS	Physical features of the employee are important in reducing risk of injury – greater strength, flexibility and joint range of movement will reduce likelihood of injury. Quality of tools will also assist reducing force and time required to perform job.

JOB TASK ANALYSIS WEEDING

PHYSICAL DEMAND	Light - Heavy
MOVEMENTS	• Shoulder flexion and abduction plus rotation • Elbow flexion and extension • Forearm pronation and supination • Wrist extension • Finger flexion and extension • Walking/squatting/lunging/crouching/kneeling/standing/sitting/forward bend • Hip flexion and extension • Knee flexion and extension • Ankle dorsiflexion and plantar flexion
SUSTAINED RISK FACTORS	• Sustained postures in any working position • Gripping • Shoulder flexion • Cervical spine flexion
REPETITIVE RISK FACTORS	• Shoulder flexion and extension • Elbow flexion and extension • Cervical spine rotation • Wrist ulnar and radial deviation, flexion and extension • Finger flexion and extension
RISK INJURY AREAS	• Back muscles and spine structures if perform task with flexed spine rather than maintaining neutral spine. • Kneeling with weed bucket to the side and having to twist to dispose of weeds. Joints and muscles are susceptible to injury in situations of twisting • Neck due to sustained flexion, leads to poor blood flow and increased risk of strain, sprain and muscle cramp. • Hands, wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm take the entire load – leading to fatigue and strain or sprain.
MODIFICATIONS	• Physical demand is significantly reduced with use of vehicle-mounted weed sprayer (see Drive Vehicle) • Regular re-set stretches and postural exercises • Maintain neutral spine at all times to ensure the correct curve of the spine can be maintained • Keep body as close to task as possible, with all materials in front of body rather than to the sides and behind. To ensure this, several changes to working position may be required and allow posture breaks, e.g. kneel, squat, stand • Use tools/equipment such as long handled pickup sticks, weeding forks to minimise bending/stooping • Use power grip (whole hand) rather than pinch grips (fingers only)
ENVIRONMENTAL FACTORS	Weather and temperature may play a role in determining susceptibility to injury– e.g. cold can lead to increased joint stiffness whereas heat may lead to higher level of dehydration.
OTHER FACTORS	Overall level of force and length of movement repetition will depend on method selected for weeding, and will vary based on the amount of weeds to be pulled out, the size and depth of roots, use of chemicals/weed spray compared to manually pulling out weeds.

JOB TASK ANALYSIS WIND HOSE REEL

PHYSICAL DEMAND	Medium - Heavy
MOVEMENTS	- Bilateral lower limb coordination to sit, stand, walk and turn. - Moderate range of hip flexion, extension, knee flexion and extension. Ankle dorsiflexion and plantar flexion. At times, under load. - Cervical flexion, extension, and rotation. - Slight shoulder flexion. Shoulder abduction/adduction combined with varied degree of rotation of shoulders. At times, under load. - Unilateral/bilateral wrist flexion, extension, radial and ulnar deviation. At times, under load. - Elbow flexion and extension concentric and eccentric control required. At times, under load. - Forearm pronation and supination. - Flexion and extension of thumbs and fingers as required to grasp item with moderate intensity. Standing, stooping, forward bend
SUSTAINED RISK FACTORS	- Hands low and elbows maintain flexed position plus hands gripping when controlling kinks in hose when winding up. - Standing, stooping, forward bend
REPETITIVE RISK FACTORS	- Shoulder flexion and extension, varied amount of rotation - Finger flexion - gripping to wind reel. - Elbow flexion/extension, pronation/supination - Hip and knee flexion and extension to move body and use to initiate winding action.
RISK INJURY AREAS	Back muscles and spine structures - if fail to use legs (i.e. bend at hips, knees and ankles) to lower and lift rather than maintain neutral spine. - Knees and back - if feet facing different way to trunk. Joints and muscles are susceptible to injury in situations of twisting. - Neck due to sustained flexion, elongation of spinal muscles leads to poor blood flow and increased risk of injury. Neck strain, sprain and muscle cramp. - Pressure injury (neuralgic, bruising or blisters) if reel and hose held inefficiently. - Shoulder cumulative injury due to repeated tasks requiring use of force whilst positioned in various degrees of flexion and abduction, protracted in relation to spine. - Shoulder injury if uncontrolled twisting or repeated cross centreline reaching. Both of these lead to increased risk of impingement. - Shoulders and wrists if poor technique – using upper body strength to perform movements rather than body weight and leg strength. - Hands, wrists and forearms when inefficient grip is used and smaller muscles of the hand and forearm take the entire load – leading to fatigue and strain or sprain.
MODIFICATIONS	- Pre-start warm up. - Regular re-set stretches and regular postural exercises. - Ambidextrous use of upper limbs maintaining neutral joint positions- right side, use right hand and left side use left hand, to reduce internal rotation of shoulder and risk of impingement. - Maintain neutral spine at all times. Use lower limb joints (hip, knee and ankle) to position body. - Use a gentle controlling grip, not heavy grip on the hose and reel. - Use a two handed grip, carry and move feet to face where placing it so that no twisting of knees and spinal structures occur. - Correctly fitting gloves – poorly fitting gloves result in greater muscle use to manipulate items and muscles fatiguing faster. - Regular maintenance of reel – if it becomes stiff it will require more muscular effort to wind up the hose.
ENVIRONMENTAL FACTORS	Surface quality – if there is rough uneven ground to move hose over it will require increased force to push over the ground. Effects of temperature can increase likelihood of injury – heat leading to dehydration and reduced health of body tissue, cold can lead to poor circulation and reduced flexibility.
OTHER FACTORS	Weight, length, diameter of hose and style and location of reel will alter how much force is required. Physical capabilities of staff – cardiovascular fitness and strength – will alter how the forces affect them. Temporal factors – if rushing there is greater likelihood of mistakes and injuries occurring.

JOB TASK ANALYSIS WORK ON EWP (ELEVATED WORK PLATFORM)

PHYSICAL DEMAND	Light - Medium
MOVEMENTS	• Sustained standing. • Elbow flexion and extension • Shoulder flexion, extension, abduction and adduction • Shoulder protraction • Forearm pronation and supination • Leaning forward – slight thoracic spinal flexion, leg muscle activity, stabilising with arms. • Hip and knee flexion, extension and abduction to stand, climb, walk, turn • Cervical spine flexion and rotation
SUSTAINED RISK FACTORS	• Sustained standing. • Spinal and abdominal muscle activation for stability. • Shoulder flexion and protraction • Elbow flexion • Power grip – flexion of fingers and thumbs • Forearm pronation • Slight cervical flexion to observe task
REPETITIVE RISK FACTORS	• Wrist flexion, extension, radial and ulnar deviation.
RISK INJURY AREAS	• Back, shoulders, wrists, elbows and shoulder strains if maintain poor posture when standing, pushing, reaching, lifting, climbing • Back muscles and spine structures if perform any part of task with flexed spine rather than maintaining neutral spine. • Knees and back if feet facing different way to trunk. Joints and muscles are susceptible to injury in situations of twisting.
MODIFICATIONS	• Keep body as close to task as possible rather than fully extending elbows to reduce demands on postural muscles. • Regular re-set stretches and postural exercises. • Remove EWP from trailer as close to work location as possible to reduce length of time required to drive in forward-leaning position.
ENVIRONMENTAL FACTORS	Effects of temperature can increase likelihood of injury – heat leading to dehydration, cold can lead to poor circulation.
OTHER FACTORS	Access to work location including terrain will determine how long EWP will need to be driven for and hence length of time in sustained posture, and also level of force required..

COMMON TERMS

TERM	DEFINITION	SOURCE
AWKWARD	Is where the posture or action required for the task creates some discomfort or is unable to be maintained.	McPhee (1993) p. 19
CONSTANT	66-100% of work day 501+ repetitions per day 63+ reps per hour 1 rep every minute.	WorkHab International (2012)
CONSTRAINED	Is where the posture is forced, cramped, restrained or unnatural, confined or restricted.	McPhee (1993) p. 19
FREQUENT	34-66% of work day 101-500 repetitions per day 12 – 63 reps per hour 1 rep every 1-5 minutes.	WorkHab International (2009)
HAZARD	Anything that may result in injury or harm to the health of a person.	Commission for Occupational Safety & Health (2010) p. 1
HAZARDOUS MANUAL TASK	A manual task that has potential to cause injury or disease. Involves one or more of the following: forces exerted on, or by, the worker repetitive movement sustained or awkward posture exposure to vibration unstable or unbalanced loads loads that are difficult to grasp or hold.	Commission for Occupational Safety & Health (2010) p. 1
HEAVY WORK	Exerting 23kg – 45kg of force occasionally 11kg – 23kg of force frequently 4.5kg – 9kg constantly to move objects. Physical demand requirements are in excess of those for medium work.	U.S. Department of Labour (1991)
JOB	Specific set of ongoing tasks to be performed by an individual.	McPhee (1993) p. 19
LIGHT WORK	Exerting up to 9kg of force occasionally or up to 4.5kg of force frequently, or a negligible amount of force constantly to move objects. Physical demand requirements are in excess of those for Sedentary work. Even though the weight lifted may be only a negligible amount a job should be rated as light work: when it requires walking or standing to a significant degree when it requires sitting most of the time but entails pushing of arm or leg controls When the job requires working at a production rate pace entailing constant pushing or pulling of materials even though the weight of those materials is negligible.	U.S. Department of Labour (1991)
LONG DURATION	More than 2 hours over a whole shift Continuously for more than 30 minutes at a time.	Safe Work Australia (2011)
MANUAL HANDLING	A task requiring a person to lift, lower, push, pull, carry or otherwise move, hold or restrain any person, animal or object.	Commission for Occupational Safety & Health (2010) p. 1
MEDIUM WORK	Exerting 9kg – 23kg of force occasionally or 4.5kg – 11kg of force frequently, or greater than negligible up to 4.5kg of force constantly to move objects. Physical demand requirements are in excess of those for Light work.	U.S. Department of Labour (1991)
MUSCULOSKELETAL DISORDER	An injury to, or a disease of, the musculoskeletal system whether occurring suddenly or overtime.	Commission for Occupational Safety & Health (2010) p. 1
OCCASIONAL	1-33% of work day 1-100 repetitions per day 1-12 reps per hour 1 rep every 5-15 minutes.	WorkHab International (2009)
PINCH GRIP	Grip between the thumb and the side of the index finger – is used for picking up small objects, but not for manipulating them accurately (power grip). Variants of the pinch grip include a flat grip for the edge of a dinner plate.	Patkin (2001)
POWER GRIP	Fingers are bunched firmly around an object and overlapped by the thumb. There should be a large area of contact, no spots of local high pressure to prevent strength of grip being inhibited by discomfort. A common variant of the power grip is having the thumb straight out along the back of a handle.	Patkin (2001)
REPETITIVE	More than 2 per minute.	Safe Work Australia (2011)
RISK	The probability of any injury or harm occurring.	Commission for Occupational Safety & Health (2010) p. 1
SEDENTARY WORK	Exerting up to 4.5kg of force occasionally or a negligible amount of force frequently to lift, carry, push, pull or otherwise move objects, including the human body. Sedentary work involves sitting most of the time, but may involve walking or standing for brief periods of time. Jobs are sedentary if walking and standing are required only occasionally and all other sedentary criteria are met.	U.S. Department of Labour (1991)
SUSTAINED	Held for more than 30 seconds.	Safe Work Australia (2011)
TASK	Set of human actions that contribute to a specific functional objective and ultimately to the output or goal of a system.	McPhee (1993) p. 19
VERY HEAVY WORK	Exerting in excess of 45kg of force occasionally or in excess of 23kgs of force frequently, or in excess of 9kg of force constantly to move objects. Physical demand requirements are in excess of those for Heavy work.	U.S. Department of Labour (1991)

WORK ACTIVITY TERMS

TERM	DEFINITION
BALANCING	Maintaining body equilibrium to prevent falling when walking, standing, crouching or running on narrow, slippery or erratically moving surfaces.
BILATERAL CARRY	Transporting an object, holding it with two hands.
CLIMBING	Ascending or descending ladders, stairs, scaffoldings, ramps, poles and the like; using feet and legs and/or arms.
CRAWLING	Weight bearing on hands and knees or hands and feet in order to reach or move at low levels.
CROUCHING	Bending body downward and forward by bending legs and spine. Positioned closer to the ground than in squatting, requiring greater knee flexion.
DORSIFLEXION	Moving the ankle to bring toes towards shin
EXTENSION	Straightening a body joint
FLEXION	Bending a body joint
GRIPPING	Seizing, holding, grasping, handling, turning or otherwise working with the hand or hands. Fingers are involved only to the extent that they are an extension of the hand.
HAND DEXTERITY	Picking, pinching or otherwise working primarily with fingers rather than with the whole hand or arm. Similar to manipulation with fingers.
KNEELING	Bending legs at knees to come to rest on knee or knees.
LIFTING	Raising or lowering an object from one level to another – includes pulling upwards.
OVERHEAD LYING DOWN	Lying supine (back to the surface, facing up) performing a task with hands reaching overhead.
PLANTARFLEXION	Moving the ankle to point toes away from shin
PRONATION	Rotate forearm to place palm of hand down. Involves the elbow and wrist joints.
PULLING	Exerting force upon an object so that the object moves towards the force (includes jerking).
PUSHING	Exerting force upon an object so that the object moves away from the force (includes slapping, striking, kicking and treadle actions).
RADIAL DEVIATION	Side-bending the wrist towards the radius (a bone on the thumb side of the arm)
REACHING	Extending hand(s) and arm(s) in any direction away from the body. Involves back and torso as well as upper extremities. OVERHEAD: reaching upwards, above head-height. FORWARD: reaching in front of body, away from trunk.
SITTING	Remaining in the normal seated position.
STANDING	Remaining on one's feet in an upright position at a workstation without moving about.
STOOPING (Neck or Back)	Bending the neck or back downward and forward, or handling below mid-thigh height. This factor is important if it occurs to a considerable degree and requires full use of lower extremities and back muscles.
SUPINATION	Rotate forearm to place palm of hand up. Involves the elbow and wrist joints.
SQUATTING	Bending hips, knees and ankles to varying degrees in order to get the torso to a lower working level. Knees do not touch the floor.
TRUNK ROTATION	Twisting the neck, back or upper body
ULNAR DEVIATION	Side-bending the wrist towards the ulna (a bone on the 'little finger' side of the arm)
UNILATERAL CARRY	Transporting an object, holding it on one side, i.e. carrying with one hand, arm or on one shoulder.
UPPER LIMB	The arm, including shoulder, elbow, wrist, hand and fingers.
WALKING	Moving about on foot. Taking more than three steps quantifies as walking.

ADAPTED FROM:
Commission for Occupational Safety and Health Code of Practice: Manual Tasks 2010
ErgoScience Training Manual 2012
SafeWork SA Occupational Job Dictionary: Aged Care Industry 2014
U.S. Department of Labour 1991
WorkHub FCE Basic Manual 2009

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